Missoula County Carbon Monoxide Second 10-Year Limited Maintenance Plan

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April 2016

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ABBREVIATIONS

ADT	Average Daily Traffic
AIRS	Aerometric Information Retrieval System
ATR	Automatic Traffic Recorders
CAA	Clean Air Act
CO	Carbon Monoxide
BER	Board of Environmental Review
EPA	United States Environmental Protection Agency
FR	Federal Register
ft	Foot (Feet)
hr	Hour(s)
kg	Kilogram
LMP	Limited Maintenance Plan
LRTP	Long Range Transportation Plan
m	Meter(s)
MA	Maintenance Area
MASZ	Missoula Air Stagnation Zone
MCCHD	Missoula City-County Health Department
MDEQ	Montana Department of Environmental Quality
MDT	Montana Department of Transportation
MPO	Metropolitan Planning Organization
MT	Montana
MVEB(s)	Motor Vehicle Emissions Budget(s)
NAAQS	National Ambient Air Quality Standard
ppm	Parts Per Million
SLAMS	State and Local Air Monitoring Station
SIP(s)	State Implementation Plan(s)
TIP	Transportation Improvement Program
tpd	Tons Per Day
USEPA	United States Environmental Protection Agency

1.0 Introduction

As a result of the 1977 amendments to the Clean Air Act (CAA), Missoula was designated nonattainment for carbon monoxide (CO) by the U.S. Environmental Protection Agency (EPA) in the Federal Register (FR) (43 FR 9010) on March 3, 1978. The National Ambient Air Quality Standard (NAAQS) for CO is 9 parts per million (ppm) for an 8-hour average concentration, not to be exceeded more than once per calendar year. Missoula's violations of the CO NAAQS were attributed primarily to motor vehicle emissions and residential wood combustion. The community took several steps to reduce the ambient levels of CO, including reconfiguring traffic intersections to relieve congestion and implementing rules to limit emissions from residential wood combustion and outdoor burning. Missoula continued to violate the NAAQS until the early 1990s.

Following the promulgation of the Clean Air Act Amendments of 1990, EPA classified Missoula as a moderate nonattainment area for CO (56 FR 56694) based on a design value of 9.7 for 1987 through 1989. This designation required Missoula to develop a new base year inventory for 1990 and establish an oxygenated fuel program by November 1992. In June 1992, Missoula incorporated an oxygenated fuels program into the Missoula City-County Air Pollution Control Program. It was approved by the Montana Board of Environmental Review (BER) in September 1992, and implemented that November. On November 6, 1992, the Governor of Montana submitted the oxygenated fuels program to EPA for approval. Since implementing the oxygenated fuels program, Missoula has not violated the CO NAAQS.

There have been several SIP updates since Missoula was first declared nonattainment for CO. The EPA approved the Missoula CO nonattainment area plan on January 16, 1986 (51 FR 2397). Subsequent revisions were approved on November 8, 1994 (59 FR 55585) regarding the oxygenated gasoline program in Missoula; December 13, 1994 (59 FR 64133) regarding CO contingency measures; December 6, 1999 (64 FR 68034) regarding an update to the SIP narrative; and November 15, 2001 (66 FR 57391) regarding revisions to the SIP that included extensive renumbering, reorganization and rule revisions.

In 2005, the Missoula City-County Health Department (MCCHD) developed a redesignation request and maintenance plan for CO with guidance based on the 1990 amendments to the CAA and a September 4, 1992 EPA memo from John Calgani to the EPA Regional Air Directors. The Governor of Montana submitted the redesignation request to EPA on May 27, 2005, and EPA approved it on August 17, 2007 (72 FR 46158). The redesignation request addressed the five criteria required by Section 107(d)(3)(E) of the CAA, as follows:

Criterion 1: Attainment of the Applicable National Ambient Air Quality Standard
Criterion 2: State Implementation Plan Approval
Criterion 3: Permanent and Enforceable Improvements in Air Quality
Criterion 4: Fulfillment of CAA Section 110 and Part D Requirements
Criterion 5: Fully Approved Maintenance Plan under CAA Section 175A

The 2005 Missoula CO Redesignation Request included a full maintenance plan as required by the CAA for moderate nonattainment areas. However, CO levels in Missoula have dropped precipitously since the area was classified as a "moderate" nonattainment area. Between 2006 and 2011 (the most recent 5 years of CO data), the maximum CO 8-hour concentration was 4.1 ppm – well below the NAAQS.

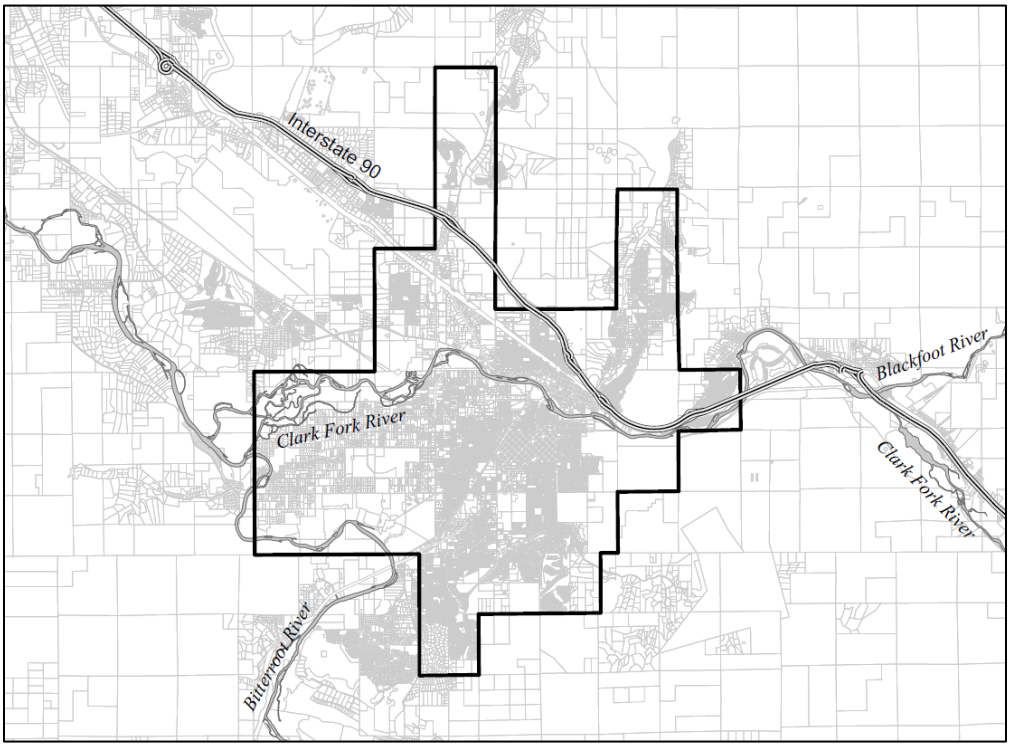
Because Missoula has not violated the NAAQS in more than 20 years and its most recent CO measurements are less than a third of the NAAQS, this second 10-year maintenance plan update will be a limited maintenance plan (LMP) as described in a 1995 EPA memo by Joseph Paisie (Limited Maintenance Plan Option for Nonclassifiable CO Nonattainment Areas, October 6, 1995) (Appendix A). The Paisie memo stated that nonclassifiable CO nonattainment areas fulfilling a specific criterion (a CO design value at or below 7.65 ppm) could choose to seek redesignation under a limited maintenance plan. Per February 2, 2015 communications with EPA Region 8 staff, Missoula now qualifies for the LMP option.

1.1 Maintenance Area Boundary

The Missoula CO maintenance area includes the following (Range and Township) sections: R19W T14N – sections: 29 and 32; R19W T13N – sections: 2, 5, 7, 8, 11, 14 through 24, and 26 through 34; R19W T12N – sections: 4 through 7; R20W T13N – sections: 23 through 26, 35 and 36

This area essentially includes the City of Missoula and some surrounding area in Missoula County. A map illustrating the area boundary is shown in Figure 1.1. Maps of the CO Maintenance Area and the Missoula City limits are in Appendix B.

Figure 1.1 Map of the Missoula CO Maintenance Area



1.2 Requirements for a Limited Maintenance Plan

The LMP requirements are set out in the October 1995 EPA-issued guidance on streamlined maintenance plan provisions for certain CO nonattainment areas (the Paisie memo).

MCCHD has updated the 2005 Missoula CO Maintenance Plan and the revisions for this second 10-year plan fulfill the LMP requirements outlined in the Paisie memo.

To qualify for the LMP option:

- The area should have attained the CO NAAQS; and
- The average 8-hour CO design value for the area, based on the two years of data used to demonstrate attainment, must be at or below 7.65 ppm with no violations at any monitor in the area.

In addition, the LMP must include:

- an attainment year emission inventory;
- a maintenance demonstration;
- an EPA-approved air quality monitoring network/verification of continued attainment;
- contingency provisions; and
- a conformity determination discussion

1.3 Agencies Responsible for the Missoula County CO Limited Maintenance Plan

In 1978, the Governor of Montana appointed the Missoula City-County Board of Health/Air Pollution Control Board (Board) as the lead agency for Missoula nonattainment area SIP submittals. Therefore, Missoula City-County Health Department Air Division staff prepared this LMP. The Montana Department of Environmental Quality (MDEQ) provided consultation and modeling assistance.

As the lead agency, MCCHD prepared the CO LMP, as well as the emission inventory and its associated documents. The LMP was made available for public comment both online and at the Health Department two weeks prior to the Air Pollution Control Board's approval of this document. In addition to soliciting public comment via emails to Interested Parties and public notices in the local paper, MCCHD staff presented the LMP to the Missoula City-County Air Quality Advisory Council. As required by Section 174(a) of the CAA, MCCHD also consulted with the Missoula City Council, the Missoula Board of County Commissioners and the Missoula Transportation Policy Coordinating Committee. Each of these meetings was publicly noticed according to their individual protocols. The Missoula City-County Board of Health/Air Pollution Control Board held a public hearing for the LMP on May 19, 2016. MCCHD's responses to all public comments and the record of adoption are in Appendix D.

Following the Board's adoption of the LMP, the document was forwarded to MDEQ for an additional 30 day public comment period prior to its submittal to the EPA by the Governor of Montana.

2.0 Attainment Inventory

As set out in the Paisie memo, the LMP emission inventory should represent emissions during the time period associated with the monitoring data showing attainment and the inventory should be based on actual "typical winter day" emissions of CO. Carbon monoxide monitoring in Missoula ceased in 2011, so this emission inventory is based on a 2010 winter day in the CO Maintenance Area. The Emission Inventory Preparation Plan was approved by the EPA on July 22, 2015 (Chris Dresser, personal correspondence). The complete emission inventory is located in Appendix C.

2.1 Emission Inventory Design

Several types of information were reviewed prior to designing the format of this 2010 Missoula CO emission inventory. This information included previous Missoula CO emission inventories, local air monitoring data, and meteorological data. The City of Missoula lies within a deep mountain valley just above the confluence of the Clark Fork and Bitterroot Rivers. The city's elevation is approximately 985 meters (m) (3,232 feet (ft)) above sea level. The peaks of the mountains surrounding Missoula range from 1,219 to 2,134 m (4,000 to 7,000 ft) above sea level. Due to its location and topography, the fall and winter are prone to frequent temperature

inversions that last for days or weeks at a time. The mountains also tend to block the prevailing westerly winds. The resulting light surface winds, when coupled with the fall and winter temperature inversions, lead to stagnant air conditions, which lead to air pollution accumulation in the Missoula valley. Under these circumstances, citywide ambient CO levels, primarily from vehicular exhaust and wood stove emissions are raised to the point where violations of the 8-hour federal standards have occurred.

Based on this background information, MCCHD anticipated that the most important CO emission sources in the Missoula urban area would be area sources such as onroad motor vehicle exhaust, residential wood burning and nonroad motor vehicle exhaust.

2.2 Summary of All Source Categories

Table 2.2 provides summary totals of typical winter day emissions from all emission sources in the Missoula CO Maintenance Area. Figures 2.2-1 and 2.2-2 illustrate the contributions the emission sources make to daily winter CO emissions in the CO MA. Three source categories can account for almost all of the CO emissions in the Missoula CO Maintenance Area: onroad mobile sources (71 percent of winter CO emissions), residential wood burning (12 percent) and nonroad mobile sources (11 percent).

Table 2.2 Typical winter day emissions from all sources in the Missoula CO MA

Section	Typical winter day (kg CO)
Point Sources	1,728.90
Area Sources:	
Residential wood burning	4,646.71
Natural gas combustion	684.27
Nonroad Mobile Sources:	
Commercial equipment	2,876.67
Construction equipment	401.17
Industrial equipment	370.83
Residential lawn and garden equipment	297.96
Commercial lawn and garden equipment	229.55
Railway maintenance equipment	29.28
Railway locomotives	33.74
Onroad Mobile Sources:	
Motor vehicle exhaust	27,406.13
TOTAL All Sources	**38,705.21**

Figure 2.2-1 Winter 2010 Missoula CO source categories and their emissions

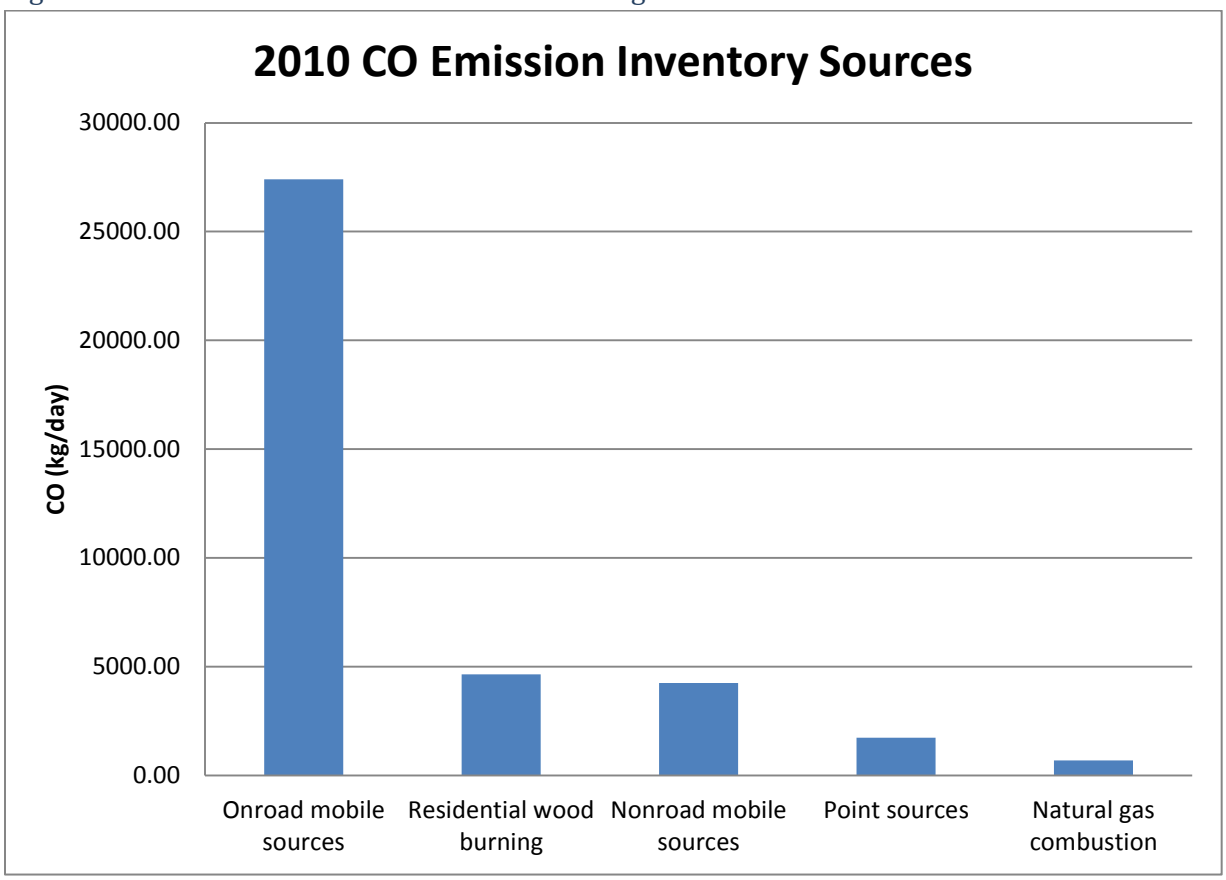
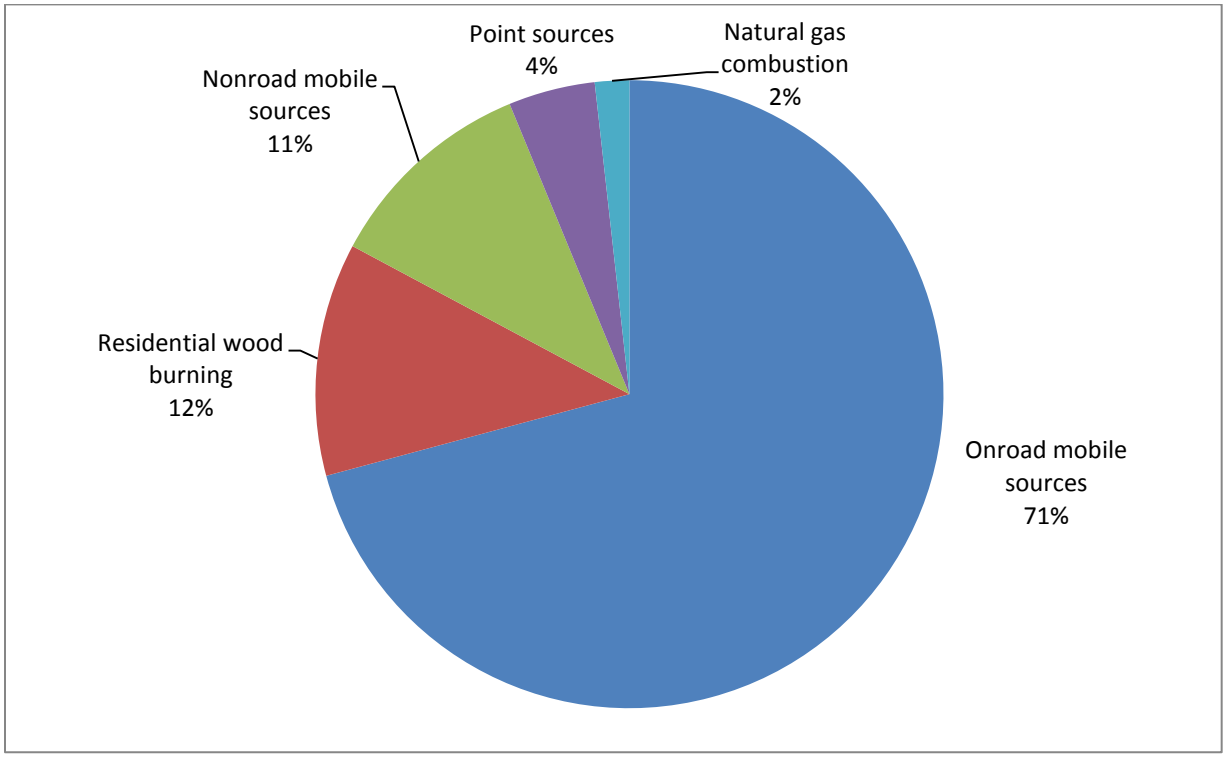


Figure 2.2-2 Winter CO emission sources in the Missoula CO MA.



3.0 Maintenance Demonstration

Missoula last violated the CO NAAQS in 1991. A violation of the 8-hour CO NAAQS occurs when two non-overlapping exceedances of the 8-hour standard are recorded during a calendar year. In 1992, Missoula had only one instance where the 8-hour average exceeded 9 ppm, and that was before the oxygenated fuels program went into effect in November of that year.

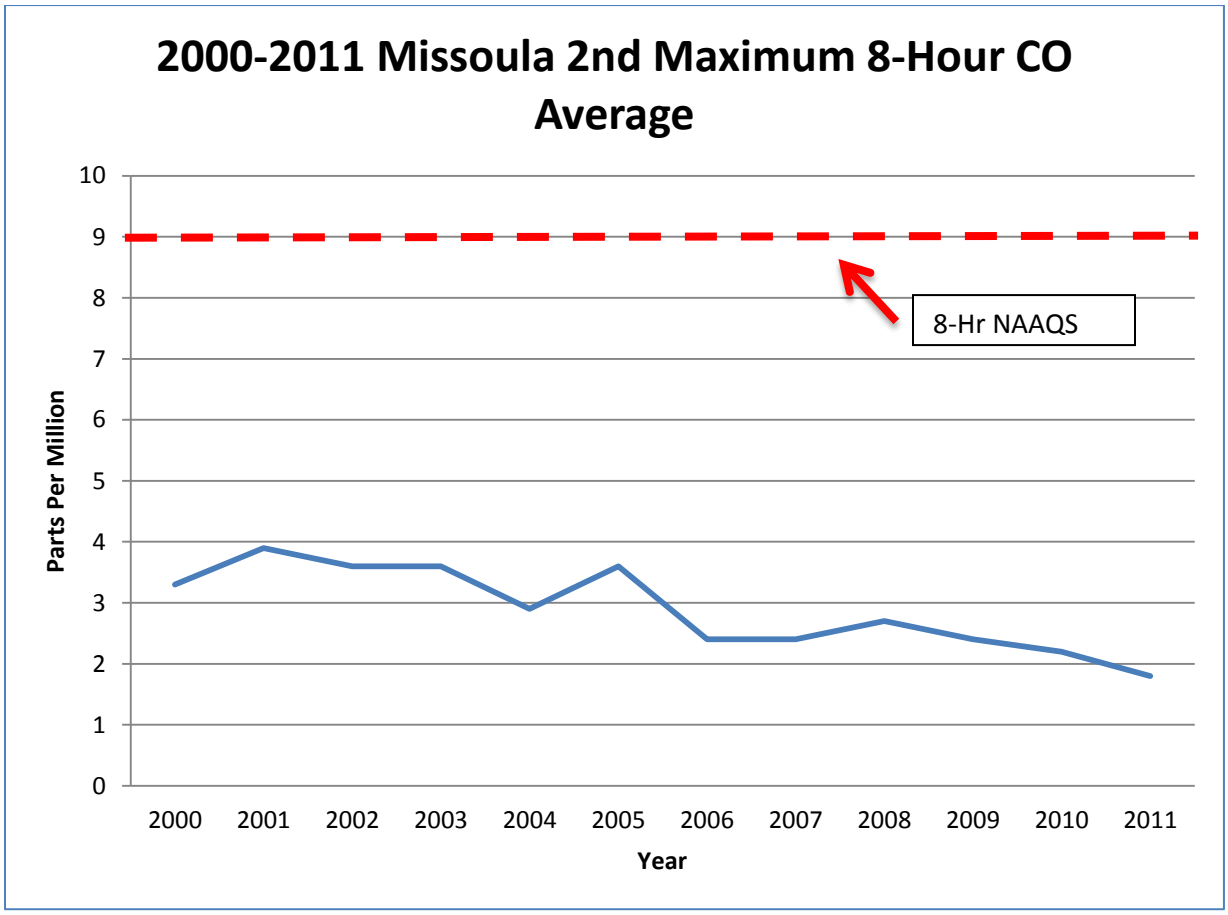
CO design values are determined based on the procedure outlined in a June 18, 1990 EPA memo from William Laxton, Director of the Technical Support Division. For the 8-hour NAAQS, the design value is determined by the second maximum 8-hour concentration value for the most recent two years or eight quarters of data. The larger of the second maximum values (or the "highest of the second highs") is used as the design value for each CO monitoring site. If more than one monitoring site exists in the area, the highest site design value is used as the design value for the entire area non-attainment area.

For the development of the initial Missoula CO Maintenance Plan, there was one monitoring site operating in the Missoula CO Nonattainment Area (now the Missoula CO Maintenance Area). Ambient CO data was collected at the Missoula Malfunction Junction State and Local Air Monitoring Station (SLAMS) site (30-063-005) located at the intersection of Brooks, South and Russell streets. Data was collected and quality assured in accordance with 40 CFR Part 58 and recorded in the EPA Aerometric Information Retrieval System (AIRS). EPA approved this SLAMS site and the data collected.

Until 1998, Missoula monitored CO at the Malfunction Junction year-round. However, once it was well established that the maximum CO concentrations occurred only in the late fall and winter, Missoula was able to reduce its monitoring to the first and last quarter of the calendar year (January through March and October through December, respectively). Missoula ceased monitoring ambient CO in 2011 due to extremely low ambient CO concentrations.

Based on data from 2010 and 2009 (the latest years with first and last quarter CO monitoring), Missoula's most recent design value is 2.4 ppm, which is well below the 8-hour NAAQS of 9 ppm and the CO LMP eligibility threshold of 7.65 ppm. Figure 3.1 illustrates the second highest 8-hour CO concentrations from the Missoula CO monitor from 2000 to 2011.

Figure 3.1 Second highest 8-hour CO concentrations in the Missoula Nonattainment Area from 2000 to 2011



3.1 Control Measures Ensure Continue Maintenance

Permanent and enforceable control measures have resulted in the improvement in air quality in Missoula. At this time, no changes are proposed to these regulations and programs.

3.1.1 Oxygenated Fuels

As required by the Clean Air Act Amendments of 1990, Missoula incorporated an oxygenated fuels program into its regulations in November 1992. From November 1 through the last day of February, all gasoline sold within the control area must have a minimum oxygen content of 2.7% by weight.

3.1.2 Federal Motor Vehicle Emission Control Program

The Federal Motor Vehicle Emission Control Program has dramatically reduced CO emissions through a continuing process of requiring manufacturers to produce vehicles that meet lower and lower emission standards. As federal standards continue to provide emission reduction benefits and older vehicles are retired from the fleet, CO levels continue to decline in Missoula.

3.1.3 Residential Wood Burning Regulations

To reduce the amount of CO emitted from residential wood burning, Missoula has adopted stringent solid fuel burning device regulations. Currently, the only new solid fuel burning devices permitted in the Air Stagnation Zone by Missoula's air regulations are pellet stoves. Additionally, the regulations require that most woodstoves be removed from property at the time of sale. As a result, far less wood is now burned in Missoula than in the past.

3.1.4 Changes in Transportation Infrastructure

A massive realignment project was completed in 2005 to simplify the Brooks/South/Russell intersection to reduce congestion and emissions from idling vehicles. The realignment project simplifies the intersection, reducing the projected peak-hour delay from 120 seconds to 20 seconds. It also allows better synchronization of all traffic lights along Brooks Street from Reserve to Mount, which helps reduce congestion along the whole corridor.

3.1.5 Outdoor Burning

Missoula's outdoor burning regulations severely limit the amount of outdoor burning that occurs in December, January and February, the months in which Missoula violated the 8-hour CO standard in the past. The impact of outdoor burning on CO levels is minimized by outdoor burning regulations that:

- Require a permit for every burn;
- Allow only untreated lumber and natural vegetation to be disposed of through outdoor burning;
- Prohibit burning piles of leaves and grass in the Air Stagnation Zone
- Require burners to activate their burn permits on the day they wish to burn for notification of any fire hazard or air quality restrictions that may be in effect;
- Establish an Impact Zone to allow for more stringent restrictions in the areas around the urban core;
- Establish burning seasons to reduce the generation and accumulation of smoke;
- Prohibit all outdoor burning in the winter months of December, January and February, except ceremonial bonfires, emergency burning and essential wintertime burning (which is prohibited in the Air Stagnation Zone).

4.0 Monitoring Network/Verification of Continued Attainment

MDEQ adopted a surrogate CO monitoring method in Missoula, Billings and Great Falls in October 2011. The monitoring method was approved by the EPA for use in the Billings CO Maintenance Area on March 30, 2015 with an effective date of April 29, 2015 (80 FR 16571) and Great Falls CO Maintenance Areas on April 1, 2015 with an effective date of May 1, 2015 (80 FR 17331). The surrogate CO monitoring method includes an annual review of the traffic volumes in each CO maintenance area using data from the Montana Department of Transportation (MDT) permanent automatic traffic recorders (ATR).

MDEQ, in cooperation with MCCHD, will continue to compare the latest rolling 3-year monthly average of the average daily traffic (ADT) volumes during the traditional high CO concentration season of November through February against the baseline ADT average for those months established by the ATR data collected during 2008-2010, as monitored CO levels were very low during this three-year period. The baseline traffic volume levels for Missoula were established using the data set in Table 4.1. Ensuing traffic volume levels and corresponding analysis for Missoula (2011-2015) are presented in Table 4.2. All data were collected from the Montana Department of Transportation's Monthly Automatic Traffic Recorder Comparisons using traffic recorder site #A-037 (http://www.mdt.mt.gov/publications/datastats/traffic_reports.shtml).

Table 4.1 Rolling 2008-2010 average monthly ATR traffic volume during November to February

Season/Year	Nov. ADT	Dec. ADT	Jan. ADT	Feb. ADT	Average Nov.-Feb. ADT
Winter 2008-09	20366	19030	18005	No data	19134
Winter 2009-10	20242	19825	20155	21056	20320
Winter 2010-11	20349	19599	20041	20895	20221
Rolling Three Year	-	-	-	-	**19892**

Table 4.2 Missoula County average daily traffic analysis for winter months 2011-2015

	Average Daily Traffic (ADT) for Site A-037							
	Winter Season	**Nov**	**Dec**	**Jan**	**Feb**	**Winter Average (Nov-Feb.)**	**Rolling Three Year Average**	**% Difference from baseline (2008-2010)**
Baseline (2008-2010)	2008-09	20366	19030	18005	No data	19134		
	2009-10	20242	19825	20155	21056	20320		
	2010-11	20349	19599	20041	20895	20221	19892	
	2011-12	20222	20170	19199	20887	20120	20220	1.65
	2012-13	20318	19674	19298	20724	20004	20115	1.12
	2013-14	20652	19745	19836	19537	19943	20022	0.66
	2014-15	21135	20540	20279	22192	21037	20328	2.19
	2015-16	21786	21135	21344	22787	21763	20914	5.14

If the ADT increases by greater than 25% when comparing the most recent, consecutive rolling 3-year period to the baseline 2008-2010 period (Table 4.1), then MDEQ , in cooperation with MCCHD, will reinstitute, for that maintenance area, gaseous monitoring at the 2008-2010

monitoring location or at a site expected to read greater CO than that site. The CO monitoring will be conducted the following winter during the November to February period and the results evaluated to determine if levels of CO emissions in the area appear to be rising commensurate with the increase in ADT. If the monitored 2nd maximum value for the November to February period has not increased from the baseline mean by an equal or greater rate at which ADT has increased, and the monitor values remain at or below 50% of the CO NAAQS (2nd max concentration ≤ 4.5 ppm), the monitor may again be removed and the ADT counts resumed. This process will be repeated each time the ADT increases by a factor of 25% (e.g. 50%, 75%) above the baseline 2008-2010 period, and the same analysis will be conducted to determine if the monitors can again be removed.

If the percent increase is not greater than 25%, then the ambient CO concentrations will be presumed to have remained relatively unchanged.

5.0 Contingency Plan

Section 175(A)(d) of the CAA requires that the maintenance plan contain contingency provisions to assure that Missoula will promptly correct any violation of the carbon monoxide standard that might occur after the Missoula CO Nonattainment Area was designated back to attainment. The primary elements of the contingency plan are 1) a list of potential contingency measures, 2) tracking and triggering mechanisms to determine when the contingency measures are needed, and 3) a description of the process for recommending and implementing the contingency measures.

Implementation of the contingency plan does not automatically require a revision of the State Implementation Plan (SIP), nor is the area necessarily redesignated once again to nonattainment. Instead, MCCHD will have an appropriate time frame to correct a violation by implementing one or more of the contingency measures. In the event that violations continue to occur after contingency measures have been implemented, additional contingency measures will be implemented until the violations are corrected.

5.1 List of potential contingency measures

Missoula County will retain the contingency measures adopted as part of the area's fully approved SIP:

a. Expansion of the oxygenated fuel program to other months besides November, December, January and February, as described in Rule 10.110 of the Missoula City-County Air Pollution Control Program.
b. Further restricting woodstove burning as described in Rule 9.601 of the Missoula City-County Air Pollution Control Program.

5.2 Tracking

The primary tracking plan for the Missoula area consists of monitoring ADT as described in Section 4.0. If the ADT increases by greater than 25% when comparing the most recent, consecutive rolling 3-year period to the baseline 2008-2010 period, then MDEQ, in cooperation with MCCHD, will reinstitute monitoring to determine the CO levels in the maintenance area. The CO monitoring will be conducted the following winter during the November to February period and the results evaluated to determine if traditional CO monitoring with a gaseous analyzer should continue in Missoula.

5.3 Triggering

If traditional CO monitoring has resumed in Missoula, a trend of increasing CO concentrations or a single 8-hour average of 9.5 ppm or greater will trigger a voluntary, local process by the Missoula Air Pollution Control Board to identify and evaluate potential contingency measures. A violation of the CO NAAQS would trigger mandatory implementation of contingency measures. Specifically, this would be two or more values of 9.5ppm or greater during a calendar year.

5.4 Process for Implementing Contingency Measures

Missoula will implement the contingency measures outlined in the Missoula City-County Air Pollution Control Program within sixty (60) days of notification by MDEQ and EPA that the area has violated the CO NAAQS. Information on the historical exceedances of the standard, the meteorological conditions related to the recent exceedance(s) and the most recent estimates of population and traffic growth and emissions will be reviewed. The possibility of an exceptional or natural event will also be evaluated. Following the review of this information, the necessary contingency measure(s) will be selected and implemented.

6.0 Conformity Determinations Under Limited Maintenance Plans

Conformity provisions ensure that federally funded or approved projects and actions conform to the air quality planning goals of the Missoula CO control program before they are constructed. The transportation conformity rule of November 24, 1993 (58 FR 62188) and the general conformity rule of November 30, 1993 (58 FR 63214) apply to nonattainment areas and maintenance areas operating under maintenance plans. Under either rule, conformity can be demonstrated by indicating that the expected emissions from planned actions are consistent with the emissions budget for the area. Because Missoula was classified as a “moderate” nonattainment area for CO in 1990, the area’s first 10-year CO maintenance plan was a full maintenance plan and included motor vehicle emissions budgets (MVEBs) for CO. When EPA approved this plan in 2007, they approved the CO MVEBs for the years 2000 (44.86 tpd), 2010 (43.22 tpd), and 2020 (42.67 tpd).

In areas with LMPs, conformity determinations are still required, but an LMP has no emission budget because, according to the 1995 Paisie memo, “emissions budgets in limited

maintenance plan areas may be treated as essentially not constraining for the length of the initial maintenance period." However, because Missoula's first 10-year maintenance plan included EPA-approved SIP MVEBs, these remain in effect until the time period they cover has passed.

For the Missoula CO maintenance area, the prior EPA-approved MVEB for 2020 was 42.67 tpd of CO (72 FR 46158, August 17, 2007). In view of 40 CFR 93.118(e)(1), consistency to the MVEB from the first maintenance plan must continue to be demonstrated for as long as the MVEB is within the timeframe of the transportation plan (i.e., until calendar year 2021). So, with EPA's approval of a CO second 10-year LMP for the Missoula area; beginning in 2021 no regional emissions analyses will be required from the Missoula Metropolitan Planning Organization (MPO) for the Long Range Transportation Plan (LRTP) or the transportation improvement program (TIP) transportation plan. This reflects the provisions in EPA's CO LMP policy and 40 CFR 93.109(e) and 40 CFR 93.118(e)(1).

Under an LMP, federal actions subject to the general conformity rule would automatically satisfy the "budget test' specified in 40C FR 93.158(a)(5)(i)(A). For transportation conformity, after the EPA approves this LMP, federal actions requiring conformity determinations are considered to satisfy the budget test specified in sections 93.118, 93.119 and 93.120 of the conformity rule. Transportation plans, transportation improvement programs and federal projects will require conformity determinations in order to proceed and federal projects are still subject to the criteria for CO hot spots (40 CFR 93.116 and 93.123) and for CO control measures. MCCHD will continue to work with the affected jurisdictions and interested parties to develop an evaluation criteria and process to meet these transportation conformity requirements.

7.0 Maintenance Plan Requirements

After submittal and approval of this second 10-year LMP, there are no further requirements for any additional revisions or modifications to the LMP.

APPENDIX A: LIMITED MAINTENANCE PLAN OPTION

October 6, 1995

MEMORANDUM

SUBJECT: Limited Maintenance Plan Option for Nonclassifiable CO Nonattainment Areas

FROM: Joseph W. Paisie, Group Leader
Integrated Policy and Strategies Group (MD-15)

TO: Air Branch Chiefs, Regions I-X

On November 16, 1994, EPA issued guidance regarding a limited maintenance plan option for nonclassifiable ozone nonattainment areas in a memorandum from Sally L. Shaver, Director, Air Quality Strategies and Standards Division, to Regional Air Division Directors. EPA believes that such an option is also appropriate for nonclassifiable CO nonattainment areas and the following questions and answers set forth EPA's guidance regarding the availability of this option for such areas. As this is guidance, final and binding determinations regarding the eligibility of areas for the limited maintenance plan option will only be made in the context of notice and comment rulemaking actions regarding specific redesignation requests.

If there are any questions concerning the limited maintenance plan option for nonclassifiable CO areas, please contact me at (919) 541-5556 or Larry Wallace at (919) 541-0906.
Attachment

cc: E. Cummings, OMS
K. McLean, OGC
C. Oldham
L. Wallace

AQSSD:IPSG:LWALLACE:vwyatt:x5628:MD-12:10-6-95
WALLACE: A:\JOE.ABC

10/6/95

Limited Maintenance Plan Option for Nonclassifiable CO
Nonattainment areas

1. **Question:**

What requirements must CO nonclassifiable areas, which are attaining the CO NAAQS with a design value that is significantly below the NAAQS, meet in order to have an approvable maintenance plan under section 175A of the Act?

Answer:

Nonclassifiable CO nonattainment areas seeking redesignation to attainment whose design values are at or below 7.65ppm (85 percent of exceedance levels of the CO NAAQS) at the time of redesignation may choose to submit a less rigorous maintenance plan than was formerly required. This new option is being termed a limited maintenance plan. Nonclassifiable CO areas with design values greater than 7.65ppm will continue to be subject to full maintenance plan requirements described in the September 4, 1992 memorandum, "Procedures for Processing Requests to Redesignate Areas to Attainment," from John Calcagni, former Director of the OAQPS Air Quality Management Division to the Regional Air Division Directors.

The EPA now believes that it is justifiable and appropriate to apply a different set of maintenance plan requirements to a nonclassifiable CO nonattainment areas whose monitored air quality is equal to or less than 85 percent of exceedance levels of the ozone NAAQS. The EPA does not believe that the full maintenance plan requirements need be applied to these areas because they have achieved air quality levels well below the standard without the application of control measures required by the Act for moderate and serious nonattainment areas. Also, these areas do not have either a recent history of monitored violation of the CO NAAQS or a long prior history of monitored air quality problems. The EPA believes that the continued applicability of prevention of significant deterioration (PSD) requirements, any control measures already in the SIP, and Federal measures (such as the Federal motor vehicle control program) should provide adequate assurance of maintenance for these areas.

2. **Question:**

Besides having a design value that is equal to or less than 85% of the CO NAAQS what other requirements are necessary for a nonclassifiable CO nonattainment area to qualify for the limited maintenance plan option?

Answer:

To qualify for the limited maintenance plan option, the CO design value for the area, based on the 8 consecutive quarters (2 years of data) used to demonstrate attainment, must be at or below 7.65ppm (85 percent of exceedance levels of the ozone NAAQS). Additionally, the design value for the area must continue to be at or below 7.65ppm until the time of final EPA action on the redesignation. The method for calculating design values is presented in the June 18, 1990 memorandum, "Ozone and Carbon Monoxide Design Value Calculations," from William G. Laxton, former Director of the OAQPS Technical Support Division to Regional Air Directors. The memorandum focuses primarily on determining design values for nonattainment areas in order to classify the areas as moderate or serious for CO. Therefore, the document discusses determining the design value for an area based on the monitors which are exceeding the standard. In the case of a nonattainment area seeking redesignation to attainment, all monitors must be meeting the standard. To assess whether a nonclassifiable area meets the applicability cutoff for the limited maintenance plan, a separate design value must be developed for every monitoring site. The highest of these design values is the design value for the whole area. If the area design value is at or below 7.65ppm, the State may select the limited maintenance plan option for the first 10-year maintenance period under section 175A. If the design value for the area exceeds 7.65ppm prior to final EPA action on the redesignation, the area no longer qualifies for the limited maintenance plan and must instead submit a full maintenance plan, as indicated in the September 4, 1992 memorandum.

3. **Question:**

What elements must be contained in a section 175A maintenance plan for nonclassifiable CO areas which qualify for the limited maintenance plan option?

Answer:

Following is a list of core provisions which should be included in the limited maintenance plan for CO nonclassifiable areas. Any final EPA determination regarding the adequacy of a limited maintenance plan will be made following review of the plan submittal in light of the particular circumstances facing the area proposed for redesignation and based on all relevant available information.

a. Attainment Inventory

The State should develop an attainment emissions inventory to identify a level of emissions in the area which is sufficient to attain the NAAQS. This inventory should be consistent with EPA's most recent guidance[1] on emissions inventories for nonattainment areas available at the time and should represent emissions during the time period associated with the monitoring data showing attainment. The inventory should be based on actual "typical winter day" emissions of CO.

b. Maintenance Demonstration

The maintenance demonstration requirement is considered to be satisfied for nonclassifiable areas if the monitoring data show that the area is meeting the air quality criteria for limited maintenance areas (7.65ppm or 85% of the CO NAAQS). There is no requirement to project emissions over the maintenance period. The EPA believes if the area begins the maintenance period at or below 85 percent of exceedance levels, the air quality along with the continued applicability of PSD requirements, any control measures already in the SIP, and Federal measures, should provide adequate assurance of maintenance over the initial 10-year maintenance period.

When EPA approves a limited maintenance plan, EPA is concluding that an emissions budget may be treated as essentially not constraining for the length of the maintenance

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[1]The EPA's current guidance on the preparation of emissions inventories for ozone areas is contained in the following documents: "Procedures for the Preparation of Emission Inventories for Carbon Monoxide and Precursors of Ozone: Volume I" (EPA-450/4-91-016), "Emission Inventory Requirements for Ozone State Implementation Plans" (EPA-450/4-91-010), and "Procedures for Emission Inventory Preparation: Volume IV, Mobile Sources" (EPA-450/4-81-026d).

period because it is unreasonable to expect that such an area will experience so much growth in that period that a violation of the CO NAAQS would result.

c. Monitoring Network/Verification of Continued Attainment

To verify the attainment status of the area over the maintenance period, the maintenance plan should contain provisions for 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 a limited maintenance plan because there will be no cap on emissions.

d. Contingency Plan

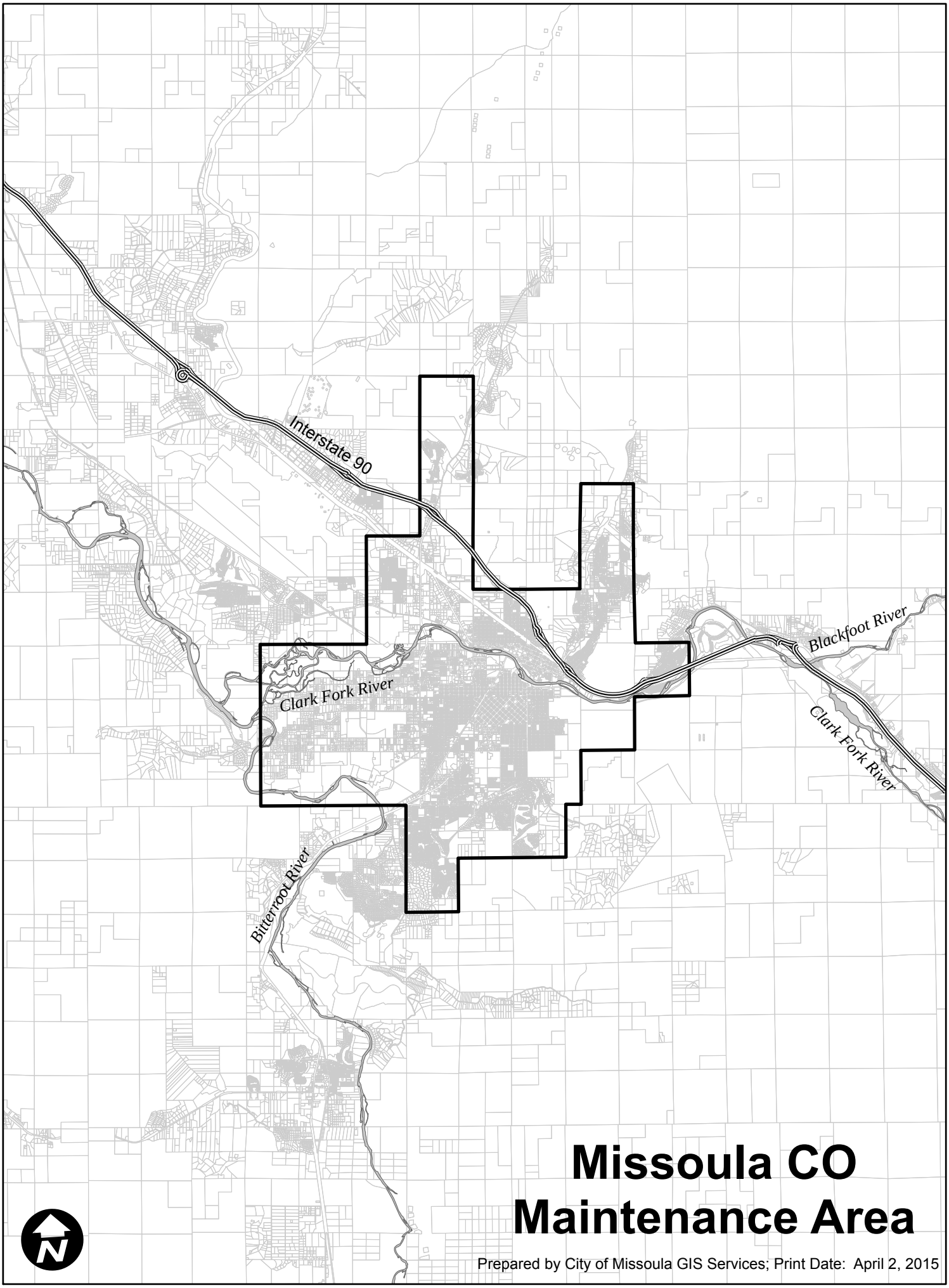
Section 175A of the Act requires that a maintenance plan include contingency provisions, as necessary, to promptly correct any violation of the NAAQS that occurs after redesignation of the area. These contingency measures do not have to be fully adopted at the time of redesignation. However, the contingency plan is considered to be an enforceable part of the SIP and should ensure that the contingency measures are adopted expeditiously once they are triggered by a specified event. The contingency plan should identify the measures to be promptly adopted and provide a schedule and procedure for adoption and implementation of the measures. The State should also identify specific indicators, or triggers, which will be used to determine when the contingency measures need to be implemented. While a violation of the NAAQS is an acceptable trigger, States may wish to choose a pre-violation action level as a trigger, such as an exceedance of the NAAQS. By taking early action, a State may be able to prevent any actual violation of the NAAQS and, therefore, eliminate any need on the part of EPA to redesignate an area back to nonattainment.

e. Conformity Determinations Under Limited Maintenance Plans

The transportation conformity rule (58 FR 62188; November 24, 1993) and the general conformity rule (58 FR 63214; November 30, 1993) apply to nonattainment areas and maintenance areas operating under maintenance plans. Under either 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 limited maintenance plan areas may be treated as essentially not constraining for the length of the initial maintenance period because it is unreasonable to expect that such an area will experience so much growth in that period that a violation of the CO NAAQS would result. In other words, EPA would be concluding that emissions need not be capped for the maintenance period. Therefore, in areas with approved limited maintenance plans, Federal actions requiring conformity determinations under the transportation conformity rule could be considered to satisfy the "budget test" required in sections 93.118, 93.119, and 93.120 of the rule. Similarly, in these areas, Federal actions subject to the general conformity rule could be considered to satisfy the "budget test"

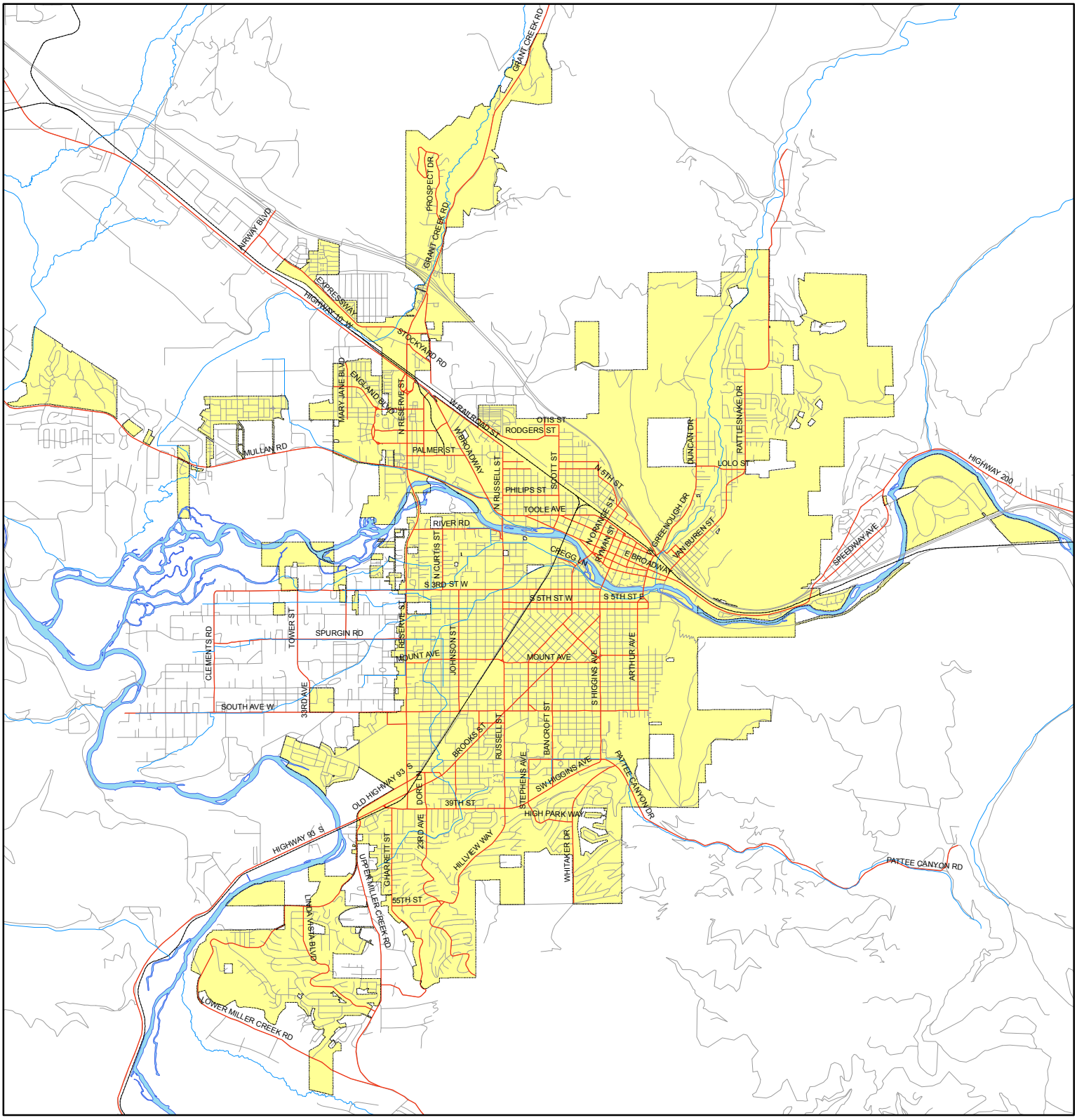
specified in section 93.158(a)(5)(i)(A) of the rule.

APPENDIX B: MAPS



Missoula CO Maintenance Area

Prepared by City of Missoula GIS Services; Print Date: April 2, 2015



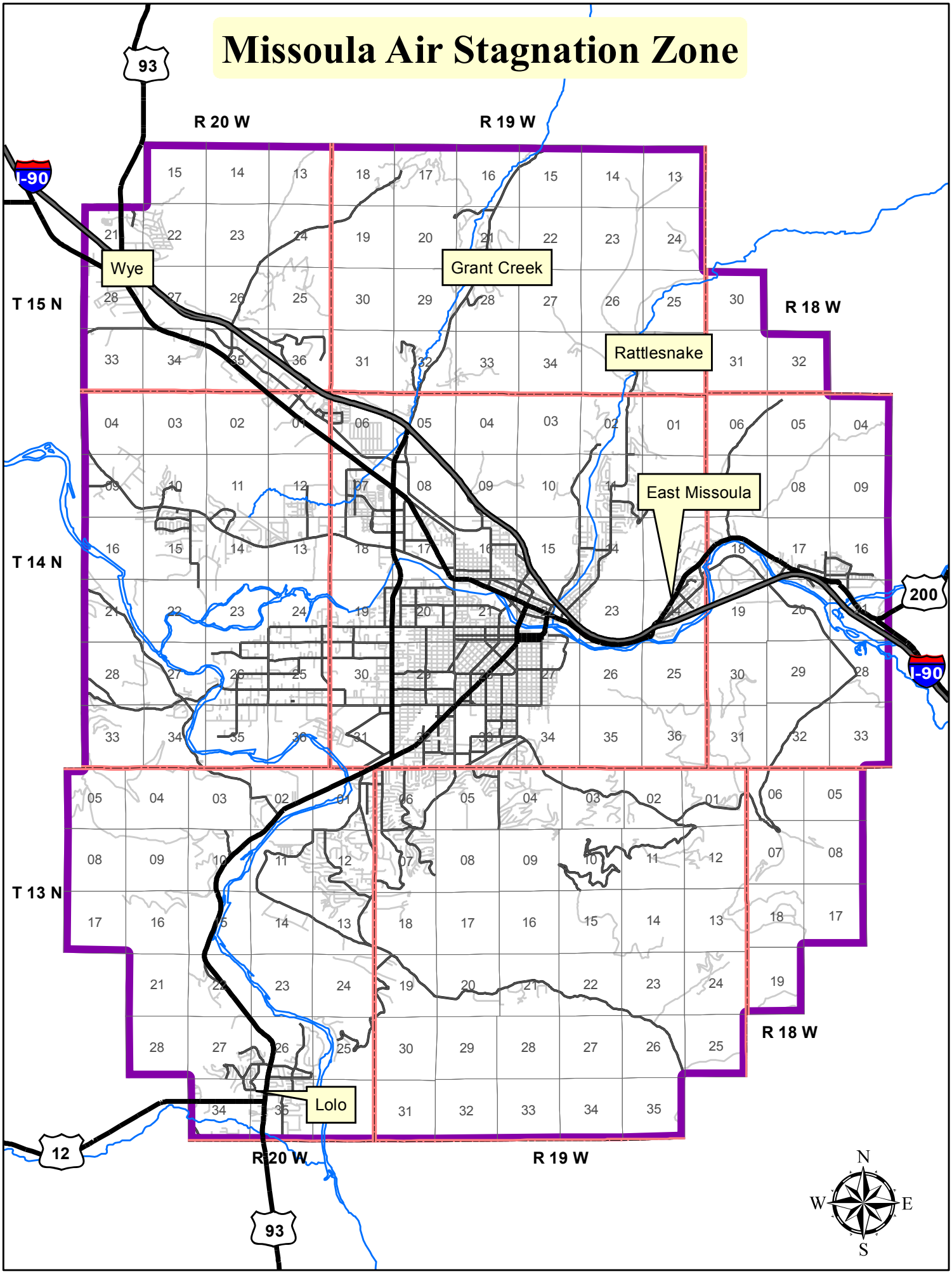
CITY OF MISSOULA, MONTANA - CITY LIMITS MAP

City Limits as of:
February 24, 2014

0 0.5 1 2 Miles

29.2 Square Miles
18,708 Acres
814,932,056 Square Feet

Printing Date: Thursday, February 27, 2014
File: CityMap_8.5x11_PDF.mxd
Prepared By: GIS Services


Missoula Air Stagnation Zone
93
R 20 W
R 19 W
I-90
Wye
Grant Creek
T 15 N
R 18 W
Rattlesnake
East Missoula
T 14 N
200
I-90
T 13 N
R 18 W
Lolo
12
R 20 W
R 19 W
93
N
W
E
S

APPENDIX C: MISSOULA 2010 CARBON MONOXIDE EMISSION INVENTORY

2010 Carbon Monoxide Emission Inventory

In support of Missoula County's Limited Maintenance Plan for the Missoula Carbon Monoxide Maintenance Area

Prepared by
Sarah Coefield
Air Quality Specialist

September 2015

Missoula City-County Health Department
Missoula, Montana 59802

Table of Contents

LIST OF TABLES AND FIGURES

ABBREVIATIONS

AP-42	Compilation of Air Pollutant Emission Factors (AP-42)
ATV	All-Terrain Vehicle(s)
BNSF	Burlington Northern and Santa Fe Railway Company
BTU	British Thermal Unit(s)
C	Centigrade
CDM	County Data Manager
CNG	Compressed Natural Gas
CO	Carbon Monoxide
CV	Coefficient of Variation
CY	Calendar Year
Dsl	Diesel
E.I.	Emission Inventory
E_f	Emission Factor(s)
EIIP	Emission Inventory Improvement Program
EPA	United States Environmental Protection Agency
EtOH	Ethanol
F	Fahrenheit
FR	Federal Register
ft	Foot (Feet)
ft^2	Feet Squared
ft^3	Cubic Foot (Feet)
g	Gram(s)
GAF	Growth Adjustment Factor
GF	Growth Factor
GIS	Geographic Information System
GVW	Gross Vehicle Weight
HDD	Heating Degree Day(s)
HPMS	Highway Performance Monitoring System
hr	Hour(s)
I/M	Inspection and Maintenance
in	Inch(es)
kg	Kilogram
lb	Pound(s)
LMP	Limited Maintenance Plan
LPG	Liquid Petroleum Gas
m	Meter(s)
MA	Maintenance Area
MASZ	Missoula Air Stagnation Zone
MCCHD	Missoula City-County Health Department
MDEQ	Montana Department of Environmental Quality
MDOR	Montana Department of Revenue
MRL	Montana Rail Link

MT	Montana
MY	Model Year
NAAQS	National Ambient Air Quality Standard
NOAA	National Oceanic and Atmospheric Administration
NOx	Oxides of Nitrogen
NSPS	New Source Performance Standards
PM	Particulate Matter
PTE	Potential to Emit
RVP	Reid Vapor Pressure
RWBS	Residential Wood Burning Survey
scf	Standard Cubic Foot (Feet)
SIP(s)	State Implementation Plan(s)
temp.	Temperature
ton(s)	English Ton(s)
TPY	Tons Per Year
USEPA	United States Environmental Protection Agency
VHT	Vehicle Hours Traveled
VMT	Vehicle Miles Traveled
Vol	Volume
yr	Year

UNITS AND CONVERSION FACTORS

Metric and English units will be used in this document. Listed below are common conversion factors used in this document to convert English units to metric units or metric units to English units.

To convert kilogram to metric ton, divide by 1,000.

To convert pound to kilogram, multiply by 0.453592.

To convert short tons to kilograms, multiply by 907.2.

To convert kilogram to pound, multiply by 2.2046.

1. INTRODUCTION

1.1 Overview

This document outlines the Missoula City-County Health Department's (MCCHD) update to the carbon monoxide (CO) emission inventory (E.I.) for the CO Missoula Maintenance Area (MA). The inventory was conducted in support of the second 10-year limited maintenance plan (LMP) for the Missoula MA.

According to LMP guidance (1), MCCHD's maintenance plan should include an emissions inventory. The inventory should represent emissions during the time period associated with the monitoring data showing attainment. The inventory should also be based on actual "typical winter day" emissions of CO. Because CO monitoring in Missoula was terminated in 2011, this emission inventory used 2010 as its base year.

In 2004, the Montana Department of Environmental Quality (MDEQ) developed a 2000 Missoula CO emission inventory (E.I.) that included the MA in its geographic scope (2). The 2000 emission inventory was prepared in support of the Missoula County Carbon Monoxide Redesignation Request and Maintenance Plan. The Governor of Montana submitted the redesignation request to the U.S. Environmental Protection Agency (EPA) on May 27, 2005, and EPA approved it in an Federal Register (FR) notice on August 17, 2007 (72 FR 46158). The 2000 CO E.I. estimated area and industrial point emissions within the Missoula urban and outlying areas, including the Missoula CO MA. For the 2010 CO E.I., MCCHD determined CO emissions from MA sources identified in the Missoula 2000 CO emission inventory.

1.2 Agencies Responsible for the Emission Inventory

The MCCHD Air Quality Division has primary responsibility for preparing and submitting the 2010 CO Emission Inventory for the Missoula CO Maintenance Area. Point source and area source emission estimates were prepared by MCCHD. The MDEQ Air Quality Bureau prepared nonroad mobile source emission estimates, which the MCCHD allocated to the MA. The MDEQ also provided emission estimates for onroad mobile sources.

Table 1.2 lists those responsible for inventory preparation and quality assurance/ quality control activities.

Table 1.2 Authors and QA/QC contacts for the 2010 Missoula CO emission inventory

Source	Author(s)	QA/QC contacts
Point	Sarah Coefield MCCHD (406) 258-4755	Cyra Cain MDEQ (406) 444-3490
Area	Sarah Coefield MCCHD (406) 258-4755	Cyra Cain MDEQ (406) 444-3490
Nonroad Mobile Sources	Sarah Coefield MCCHD (406) 258-4755 Cyra Cain MDEQ (406) 444-3490	Kristen Martin MDEQ (406) 444-3490
Onroad Mobile Sources	Cyra Cain MDEQ (406) 444-3490	Cyra Cain MDEQ (406) 444-3490

1.3 Temporal Scope

An emission inventory in support of a LMP for CO should represent emissions during the time period associated with the monitoring data showing attainment. The inventory should also be based on actual "typical winter day" emissions of CO. Because CO monitoring in Missoula was terminated in 2011, this emission inventory used 2010 as its base year.

This emission inventory was based on a winter day in 2010. Winter was defined for this E.I. as December, January and February.

Table 1.3 Seasonal apportionment for the 2010 Missoula CO emission inventory

Season	Months	Number of days
Winter	December, January, February	90

1.4 Geographic Scope

Due to data availability, this inventory was confined to the MA. The MA roughly follows the Missoula City limits (Appendix B), with a few variations. The Missoula CO maintenance area includes the following (Range and Township) sections: R19W T14N – sections: 29 and 32; R19W T13N – sections: 2, 5, 7, 8, 11, 14 through 24, and 26 through 34; R19W T12N – sections: 4 through 7; R20W T13N – sections: 23 through 26, 35 and 36 (3).

In the 2000 CO E.I., MDEQ used a gridded system to apportion emissions throughout the inventory area, which was considerably larger than the 2010 E.I. area and encompassed the City of Missoula and several surrounding communities. The grids allowed MDEQ to track emissions in specific locations, including the MA. For this inventory, MCCHD looked at emissions as a whole for the MA, and consequently, the emission inventory will not use grids.

1.5 Overview of local demographics

In 2010, Missoula was the second largest city in Montana, with a population of 66,788 according to the 2010 U.S. Census (4). Because the Missoula CO MA resembles and overlays the Missoula City limits boundary (Appendices A and B), demographic data for the city of Missoula was used in this emission inventory to derive estimates of activity or emissions within the CO MA from county-level calculations.

Table 1.5 Demographic and land profile

Demographic/geographic variable	Missoula County	Missoula City
Total Population	109,299	66,788
Land area (square miles)	2,593	27.51
Management, business, science, and arts employment	20,647	13,745
Service employment	11,671	7,749
Sales and office employment	16,277	10,306
Natural resources, construction, and maintenance employment	4,944	2,350
Production, transportation, and material moving employment	3,396	1,856
Total civilian employment	**56,935**	**36,006**

1.6 Emission Inventory Design

Several types of information were reviewed prior to designing the format of this 2010 Missoula CO emission inventory. This information included previous Missoula CO emission inventories, local air monitoring data and meteorological data. The City of Missoula lies within a deep mountain valley just above the confluence of the Clark Fork and Bitterroot Rivers. The city's elevation is approximately 985 meters (m) (3,232 feet (ft)) above sea level. The peaks of the mountains surrounding Missoula range from 1,219 to 2,134 m (4,000 to 7,000 ft) above sea level. Due to its location, frequent temperature inversions occur during the fall and winter months that persist for days or weeks at a time. The mountains also tend to block the prevailing westerly winds. The resulting light surface winds, when coupled with the fall and winter temperature inversions, lead to stagnant air conditions, which cause air pollution accumulation in the Missoula valley. Under these circumstances, citywide ambient CO levels, primarily from onroad vehicular traffic and wood stove emissions are raised to the point where violations of the 8-hour average CO federal and state standards have occurred. Based on this background information, MCCHD anticipated that the most important CO emission sources in the Missoula urban area would be area sources such as onroad mobile emissions and residential wood combustion.

1.7 Emission Overview by Source Category

1.7.1 Point Sources

The point source category includes those stationary sources that emit a significant amount of pollution into the air, such as power plants, industrial processes and large manufacturing facilities, as well as minor point sources such as refinery flares and small incinerators.

Table 1.7.1 summarizes typical winter daily emissions from point sources in the Missoula CO MA. A detailed breakdown of emissions calculations for all point sources is contained in Chapter 2.

Table 1.7.1 Typical winter day emissions from point sources in the Missoula CO MA

Source category	Typical winter day (kg CO)
Major point	1,591.45
Minor point	137.45

1.7.2 Area Sources

Area sources are facilities or activities whose individual emissions do not qualify them as point sources. Area sources represent numerous facilities or activities that individually release small amounts of a given pollutant, but collectively they can release significant amounts of pollution.

A detailed breakdown of emissions calculations for each area source category is contained in Chapter 3.

Emissions from stationary sources that were not identified as point sources in this report have been included in the area source inventory. Examples of stationary sources included as area source categories include residential wood burning and natural gas combustion.

Table 1.7.2-1 Summary of typical winter day emissions from stationary area sources in the Missoula CO MA

Category	Typical winter day (kg CO)
Residential wood burning	4,646.71
Natural gas combustion	684.27
Total	**5,330.98**

Nonroad mobile sources include off-highway vehicles and engines that move or are moved within a 12-month period. Table 1.7.2-2 summarizes winter-day emissions from nonroad mobile sources for the Missoula CO maintenance area.

Table 1.7.2-2 Typical winter day emissions from nonroad mobile sources in the Missoula CO MA

Category	Typical winter day (kg CO)
Commercial	2,876.67
Construction	401.17
Industrial	370.83
Residential lawn and garden	297.96
Commercial lawn and garden	229.55
Railway maintenance	29.28
Railway locomotives	33.74
Total	**4,239.20**

Emissions from onroad mobile sources were calculated for the Missoula CO Maintenance Area. Table 1.7.2-3 summarizes typical winter day emissions from onroad mobile sources in the Missoula CO MA.

Table 1.7.2-3 Typical winter day emissions from onroad mobile sources in the Missoula CO MA

Category	Typical winter day (kg CO)
Mobile emissions	**27,406.13**

1.7.5 Summary of All Source Categories

Table 1.7.5 provides summary totals of typical winter day emissions from all emission sources in the Missoula CO Maintenance Area. Figures 1.7.5-1 and 1.7.5-2 illustrate the contributions the emission sources make to daily winter CO emissions in the CO MA. The onroad mobile sources (motor vehicle exhaust) account for 71 percent of winter CO emissions in the Missoula CO MA.

Table 1.7.5 Typical winter day emissions from all sources in the Missoula CO MA

Section	Typical winter day (kg CO)
Point Sources	1,728.90
Area Sources:	
Residential wood burning	4,646.71
Natural gas combustion	684.27
Nonroad Mobile Sources:	
Commercial equipment	2,876.67
Construction equipment	401.17
Industrial equipment	370.83
Residential lawn and garden equipment	297.96
Commercial lawn and garden equipment	229.55
Railway maintenance equipment	29.28
Railway locomotives	33.74
Onroad Mobile Sources:	
Motor vehicle exhaust	27,406.13
TOTAL All Sources	**38,705.21**

Figure 1.7.5-1 Winter 2010 Missoula CO source categories and their emissions

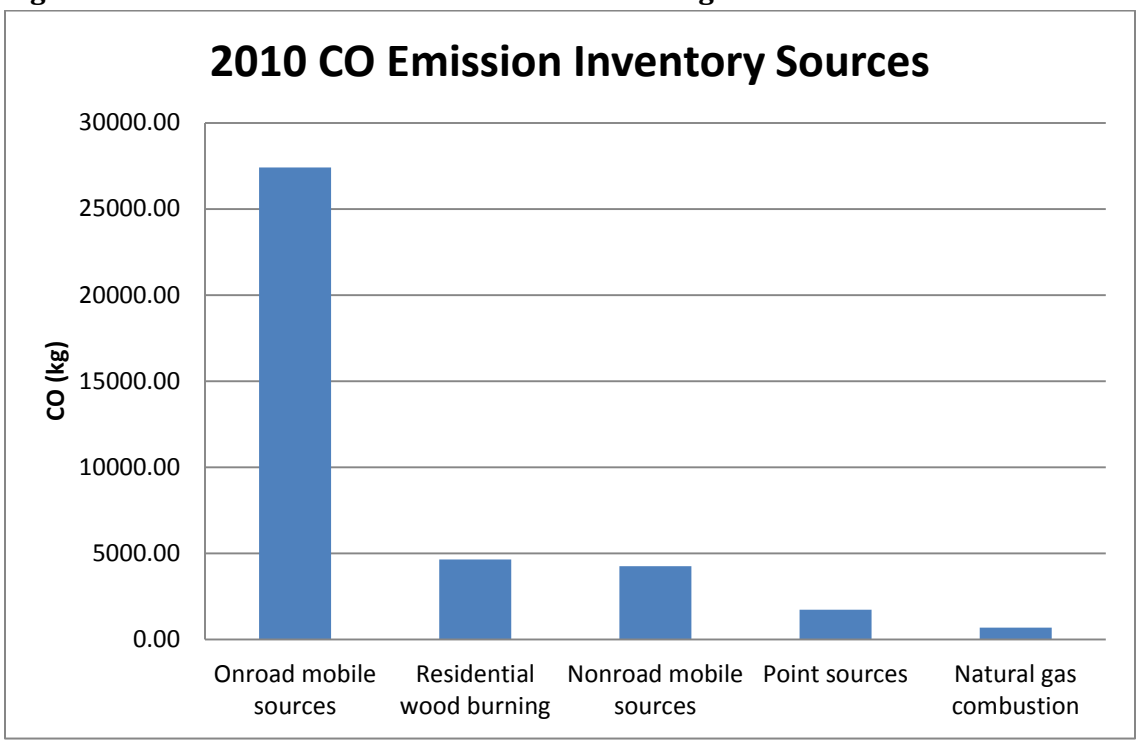
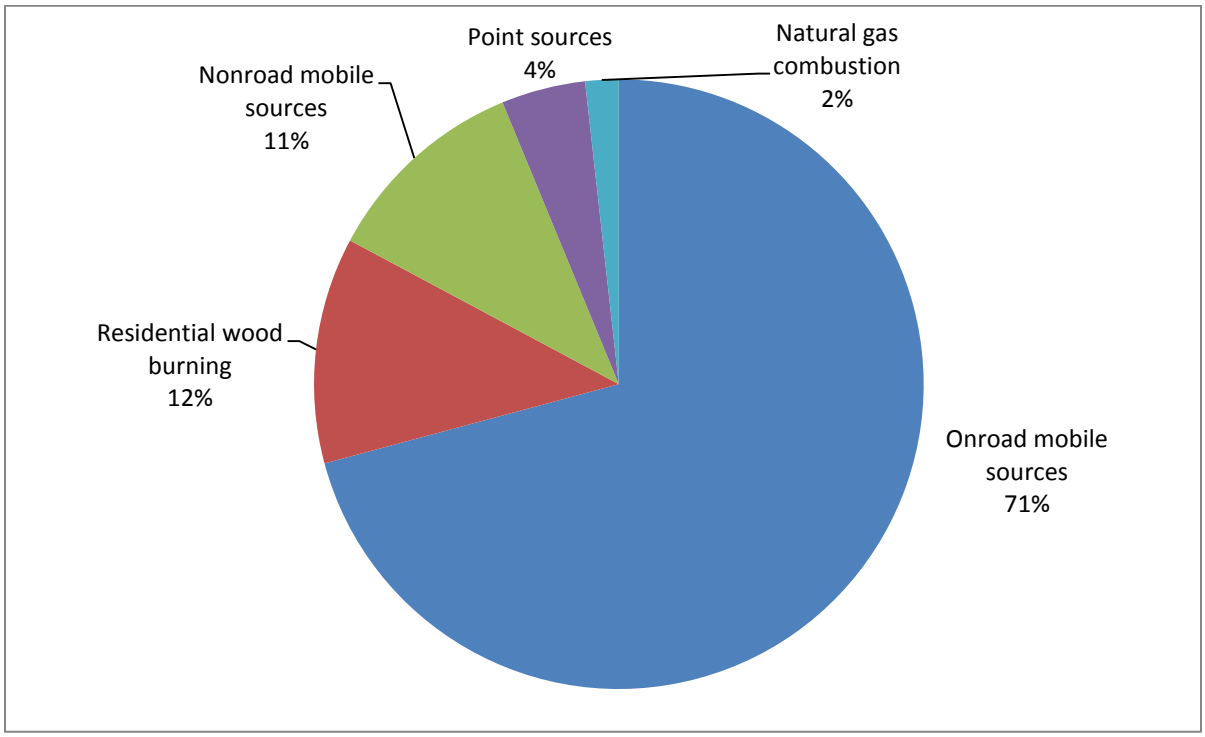


Figure 1.7.5-2 Winter CO emission sources in the Missoula CO MA



2. POINT SOURCES

2.1 Introduction and Scope

There are relatively few industrial point sources in the Missoula MA. The point sources in Missoula are either permitted by the MCCHD, the MTDEQ, or by a combination of both agencies. MTDEQ permits sources in Missoula County with the potential to emit greater than 25 English tons of air pollutants per year. MCCHD examined the MDEQ Air Quality Bureau 2010 database to identify those point sources that are located within the MA. MCCHD used each facility's 2010 Montana Air Quality Permit emission inventory potential to emit (PTE) CO estimates for the emission inventory. The potential to emit was based upon maximum design capacity and continuous 24-hour of operation per day.

There are two major point sources within the Missoula CO MA that have CO emissions listed in their MDEQ ARMB permits: Roseburg Forest Products and Momentive Specialty Chemicals, Inc. Roseburg Forest Products, located in Section 8, Township 13 North, Range 19 West, processes raw wood fiber into particleboard by refining the fiber, adding resin, and pressing the material into boards. The plant also contains a remanufacturing section, which processes the particle board into finished wood that is used in furniture production. Momentive Specialty Chemicals, Inc., located in Section 8, Township 13 North, Range 19 West, operates a formaldehyde and thermoset resin production facility

MCCHD reviewed the MCCHD Air Division Industrial Permit files to identify minor point sources permitted by Missoula County for carbon monoxide. Minor sources permitted by the County included flares at refineries and incinerators. In 2010, these sources included two refineries (CHS Inc. and ConocoPhillips) and two incinerators (Garden City Funeral Home and Crematory, and The Humane Society of Western Montana).

Point sources that were outside the MA or did not operate during the 2010 winter months were not included in this CO emission inventory.

2.2 Temporal Apportionment

Daily estimates were calculated for point sources that operated during the winter in the MA based on the number of days the source operates.

Example:
Roseberg Forest Products
2010 PTE: 606.1 tons per year (TPY)
Days of operation in 2010: 365
Daily emissions: 606.1 TPY/365 days = 1.66 tons CO per day

2.3 Summary of Point Source Emissions

Table 2.3 provides an overview of point source emissions for the Missoula CO MA.

Table 2.3 Typical 2010 daily point source emissions in the Missoula CO MA

	Source name	CO emissions (kg/day)
Major Point Sources	Roseburg Forest Products	1,506.42
	Momentive Specialty Chemicals, Inc.	85.03
Minor Point Sources	CHS Inc.	54.68
	ConocoPhillips	77.37
	Garden City Funeral Home and Crematory	4.03
	Humane Society of Western Montana	1.37
Total		**1,728.90**

3. AREA SOURCES

This section discusses the specific procedures that were used to calculate CO emissions from each area source category in the E.I. area.

All area sources in the 2000 CO E.I. were included in the 2010 CO emission inventory.

3.1 RESIDENTIAL WOOD BURNING

The MCCHD initiated the regulation of residential wood burning in the Missoula urban area through the amendment and revision of the Missoula City-County Air Pollution Control Program on November 16, 1983. Through the years, the regulations have become progressively more stringent. In 1986, the MCCHD limited the types of wood stoves that could be installed in the Missoula Air Stagnation Zone (MASZ) by amending the program regulations. In 1989, further restrictions were adopted for stoves that could be installed in the MASZ. To ensure that Missoula would continue to meet the federal ambient air quality standards, the MCCHD adopted regulations in 1994 that specified that only pellet stoves with emission rates of less than 1 gram of particulates an hour (g/hr) could be installed in MASZ. These regulations reflected the EPA New Source Performance Standards (NSPS) for new residential heaters established in 1988 (5). At the same time, the MCCHD added new regulations that required many existing, high particulate emitting wood stoves to be removed upon sale of a residential property. The changes to the Missoula City-County Air Pollution Control Program regulations were documented in the 1997 SIP version amended on November 1, 1997. The 2014 Missoula City-County Air Pollution Control Program contains the following regulations, but note that the emission rates mentioned in the following paragraphs reference the particulate matter (PM) emission rates (6).

Rule 9.202 – Permits Required for Solid Fuel Burning Devices

(1) After July 1, 1986, a person may not install or use any new solid fuel burning device in any structure within the Air Stagnation Zone without an Installation permit.

Rule 9.203 – Installation Permits Inside the Air Stagnation Zone

(1) Inside the Air Stagnation Zone, the department may only issue installation permits for pellet stoves with emissions that do not exceed 1.0 gram per hour weighted average when tested in conformance with the EPA method.

Rule 9.501 - Removal of Solid Fuel Burning Devices Upon Sale of the Property

(1) After October 1, 1994, in the Air Stagnation Zone, all solid fuel burning devices contained on property to be sold must be removed from the property or rendered permanently inoperable unless they meet the emissions requirements listed in Section (2) of this rule.

(2) The following solid fuel burning devices may remain on a property in the Air Stagnation Zone to be sold:

  (a) Woodstoves or Pellet Stoves installed with a valid permit if the emissions do not exceed:

    (i) 6.0 grams per hour weighted average when tested in conformance with the Oregon Method; or

    (ii) 5.5 grams per hour weighted average when tested in conformance with the EPA Method.

  (b) Commercially manufactured pellet stoves:

    (i) that have not been tested, but were installed prior to October 1, 1994; or

    (ii) with emissions that do not exceed 1.0 grams per hour when tested in conformance with the USEPA Method.

  (c) Fireplaces meeting the definition of Rule 9.102(6).

  (d) Wood-fired, forced-air combustion furnaces that primarily heat living space, through indirect heat transfer using forced air duct work or pressurized water systems.

Due to these restrictions, the number of solid fuel burning devices in the Air Stagnation Zone has declined since 1994, despite population growth and accompanying increase in housing. The Montana School of Technology conducted the most recent residential wood burning survey (RWBS) for the Missoula area during February through April 1996 (7). The results from this survey were adjusted to account for the effects of the MCCHD air regulations, residential growth, and other variables.

The 2000 CO E.I. used the RWBS and household data to calculate CO emissions from wood burning devices. This inventory used the household data from the 2000 E.I. (e.g. number of households in the MA in 2000) and data on houses sold in the MA 2000 - 2010 in order to determine how many wood burning devices have likely been removed from the MA since the last emission inventory.

3.1.1 Emission Factors and CO Emission Rates

The 1996 residential wood burning survey divided the wood burning devices into ten categories: Fireplace, Catalytic Pre-phase I, Catalytic Phase I, Catalytic Phase II, Conventional,

Non-catalytic Pre-phase I, Non-catalytic Phase I, Non-catalytic Phase II, Masonry Heater, and Pellet. The Non-catalytic Phase I wood stoves became available for purchase after July 1, 1990. The Phase II Non-catalytic wood stoves were available for purchase after July 1, 1992.

The particulate emission rates listed in supporting Compilation of Air Pollutant Emission Factors (AP-42) documentation were as high as 8.5 g/hr for Non-catalytic Phase I stoves and as high as 7.5 g/hr for Non-catalytic Phase II stoves (8). The MCCHD records showed that most stoves installed inside the MASZ from 1990 onward met MCCDH Class I designation. A Class I designation meant that the stove emitted 4.1 g/hr or less of particulates by the EPA Method 39. In the MSAZ, the Missoula City-County Air Pollution Control Program regulations allowed wood stoves that emit 5.5 g/hr or less to remain on a residential property when the property was sold; wood stoves that emitted more than 5.5 g/hr had to be removed from a property when the property was sold. For this inventory, all Non-catalytic Phase I and II wood stoves were assumed to have been low particulate emitting units when the RWBS was conducted. Without this assumption, more stoves were removed from the wood stove population with time, thereby decreasing the overall CO emissions from this source category in 2010. The CO emission rates for the various wood stoves are listed in Table 3.1.1.

Table 3.1.1 CO emission factors for residential wood burning devices

Wood Burning Device	CO Emission Factor (g CO/kg-dry wood)
Fireplaces[a]	126.0
Catalytic Pre-phase I (pre-1988)[b]	115.4
Catalytic Phase I[b]	52.2
Catalytic Phase II[b]	53.5
Conventional (pre-1986)[b]	115.4
Non-catalytic Pre-phase I (pre-1988)[b]	115.4
Non-catalytic Phase I[b]	115.4
Non-catalytic Phase II[b]	70.4
Masonry Heater[b]	74.5
Pellet[b,c]	19.7

[a] Emission Factor Documentation for AP-42 Section 1.9, Residential Fireplaces (9).
[b] Emission Factor Documentation for AP-42 Section 1.10, Residential Wood Stoves (8)
[c] Certified pellet stove

3.1.2 Type of Wood Burning Devices

The residential wood burning survey was conducted from February through April 1996. Information on the proportion and number of wood burning devices in the entire survey area was estimated, which has changed from that time to the year 2010, the base year for this emission inventory. The influential factors included the MCCHD regulations, residential housing sales, and increase in number of housing units due to population growth. Cyra Cain at MDEQ

developed a method to account for these factors and resulting changes in the population of wood burning devices for the Missoula 2000 Carbon Monoxide Emission Inventory (2).

Since permits were required from the MCCHD for the installation of pellet stoves from 1996 through 2010, the exact number of new pellet stoves was known. The first step, then, was to determine the total number of occupied housing units within the E.I. area, since only occupied housing units with wood stoves burned wood during the 2010 inventory year.

For the 2000 CO emission inventory, MDEQ and MCCHD collaborated to determine occupied housing units in the MASZ on a grid basis. Readers are referred to that document for more detailed information.

According to data in the 2000 CO E.I., there were 24,178 old occupied housing units in the MA in 2000. Some of residential housing units were sold after the 2000 CO E.I. was compiled. To determine the number of old units sold, the City of Missoula Geographic Information System (GIS) Services office gathered data from the Montana Department of Revenue (MDOR) to identify the number of one- or two-family housing units with at least one deed on record between 2000 and 2010, which included both new and old housing units. Data on new residential construction (one- or two-family homes) in the MA between 2000 and 2010 were also collected from the MDOR. A Missoula City/County parcel GIS layer was used to determine parcels in the MDOR database that were within the CO Maintenance Area. Geocode, Year Built and Residence Type were compiled from the MDOR database and address information was gathered from the City of Missoula Accela Automation database. An approximation of the number of old housing units sold between 2000 and 2010 was the difference between the MDOR deed data (new + old housing) and the number of building projects completed (new housing). The following assumptions were compiled to support this process of determining the number of old and new housing units in the Missoula MA.

- Wood burning devices were installed in single and two-family housing units only.
- Multiple family housing units defined in the RWBS were two-family structures. (The survey estimated the percentages of dwellings that burned wood were 85.1 and 14.9 for single and multiple family dwellings, respectively.)
- A deed in the MDOR files for an address in the MA represented a change in ownership
- The distribution of the stove types in old residential housing units was determined by the 2000 CO E.I.
- In old housing units, the Non-catalytic Phase I and II devices were low particulate emitters.
- No new residence was constructed for personal habitation.

By applying these assumptions to the MDOR deeds and building information, the number of old housing units that potentially had wood burning devices was estimated. The 2000 housing sales data were included since housing sales occur throughout the year, but traditionally the lowest transactions occur during the wintertime.

According to the 2000 CO E.I., the percentage of residences that burned wood in 2000 was 17.62. Assuming the same fraction burned wood in this old housing population, 1,808 sold residences (10,263 old houses sold 2000 – 2010 x 0.1762) had wood burning devices on the property (7). Due to MCCHD regulations, some devices had to be removed when the property was sold due to their high particulate emission rates. This factor changed the overall proportion of the wood burning devices from when the 2000 CO E.I. was conducted. The distribution of devices was calculated for this new population of devices using the distribution identified from the 2000 CO E.I., which is displayed in Table 3.1.2. For the 2010 CO E.I., this number of old units (1,808) was multiplied by the same percentages of the devices noted in the 2000 CO E.I., and the number of devices that had to be removed from the property due to the regulations was calculated (Table 3.1.2).

Table 3.1.2. 2000 and 2010 distribution and number of stove types in the 2010 Missoula MA

Type of Device	Device removed if property sold?	2000 Distribution of devices (%)[a]	2000 Total number devices in MA	2000-2010 Devices in sold MA housing units[a]	2010 Remaining devices in MA	2010 Distribution of devices (%)[a]
Fireplaces	No	49.41	2105	893	**2105**	54.42
Catalytic Pre-phase I	Yes	0	0	0	**0**	0.00
Catalytic Phase I	No	0	0	0	**0**	0.00
Catalytic Phase II	No	3.82	163	69	**163**	4.21
Conventional	Yes	22.22	947	402	**545**	14.09
Non-catalytic Pre-phase I	Yes	1.69	72	31	**41**	1.06
Non-catalytic Phase I	No	3.8	162	69	**162**	4.19
Non-catalytic Phase II	No	7.6	324	137	**324**	8.38
Masonry Heater	No	1.89	81	34	**81**	2.09
Pellet	No	9.57	408	173	**447**	11.56
Total		**100**	**4,262**	**1,808**	**3,868**	**100.00**

[a] Variance may occur due to rounding conventions.
[b] Thirty-nine (39) permitted pellet stove were added.

3.1.3 Type Of Wood Burned And Weight Of Wood

The information pertaining to the type of wood burned was obtained from the RWBS. It was

assumed that the type of wood burned did not change over time. Since woodburners generally measure the wood they cut or buy by the cord, the survey asked each respondent the number of cords of wood the household burned per season. In order to convert cords of wood to kilograms (emission factor unit), the density and volume of solid wood in a cord were required. The RWBS provided the wood species that was burned. The oven-dry specific gravity for each wood species was obtained from the Wood handbook: Wood as an engineering material (10). The volume of solid wood in a cord excludes the air spaces between each log of wood and the density of the wood is dependent upon the specie of wood and moisture content. Table 3.1.3-1 displays the parameters necessary to calculate the weighted average specific gravity.

Table 3.1.3-1. Wood species, specific gravities, percentages of species burned, and calculated weighted specific gravity for the 2010 Missoula CO emission inventory

Wood specie	Specific gravity [a],[b]	Percentage of specie burned (%)	Specific gravity [a],[b],[c]
Douglas-fir	0.5000	17.22	0.0861
Ponderosa Pine	0.4000	0.00	0.0000
Lodgepole Pine	0.4100	10.74	0.0440
Spruce	0.4400	1.85	0.0081
Western Larch or Tamarack [d]	0.5300	20.19	0.1070
Miscellaneous [e]	0.4560	50.00	0.2280
Weighted Specific Gravity		**100.00**	**0.4733**

[a] Specific gravity was based on 12 percent oven dry weight and volume from Table 5-3b, Wood handbook: Wood as an engineering material (10)
[b] Specific gravity does not have unit of measurement.
[c] Variance may occur due to rounding conventions.
[d] Tamarack specific gravity was used.
[e] Weighted average of other wood species.

According to the wood burning survey, 100 percent of the woodburners said they burned wood that was well seasoned. The Woodburners Encyclopedia reports that the moisture content of seasoned (covered) cordwood during a northwest winter cannot be less than 18 percent (oven-dry basis) (11). Considering both sapwood and heartwood for all of these species, an average moisture content of 20 percent (oven-dry basis) seemed appropriate. In the survey, over 25 percent of the wood was uncovered; therefore, it was assumed that this wood had higher moisture content than the covered wood. Therefore, uncovered wood had overall moisture content of approximately 25 percent, an increase of 7 percent from the covered wood.

Equation 4-11 in the Wood handbook: Wood as an engineering material was used to determine the specific gravity, although this equation should be used with the specific gravity based on green volume. The specific gravity at 25 percent moisture content was calculated by the following procedure.

$$\frac{G_b}{(1 - 0.2650(a)\,G_b)} = G_m$$

G_m = Specific gravity based on moisture content m
a = 1 – m/30 where m < 30
G_b = Basic specific gravity on green volume

$$\frac{0.4733}{(1 - (0.2650(25/30)0.4733))} = 0.4834$$

Applying Table 4-6b at 25 percent moisture content and 0.48 specific gravity, the density of the wood was approximately 37.4 pounds per cubic feet (lb/ft^3) via linear interpolation.

The weight of a cord of wood was also needed since most firewood was cut or purchased in this manner. A standard cord (128 ft^3) is approximately 60 to 100 cubic feet of solid wood according to The Woodburners Encyclopedia. Sawing the cord into shorter lengths and splitting reduces the volume of a cord of wood by as much as 25 percent (or increases the amount of solid wood in a cord by as much as 33 percent). Therefore, a cord of wood sawed into two foot lengths, split, and stacked contains about 106 cubic feet of solid wood (80 ft^3 x 1.33 = 106 ft^3). Since many woodburners purchased their wood in 8-foot lengths, 100 cubic feet of solid wood per cord was considered a good approximation. Table 3.1.3-2 demonstrates the method of computing the weight of a cord that was used for this 2010 inventory.

Table 3.1.3-2. Weight per cord computation used in the 2010 Missoula CO emission inventory

Wood Specie [a]	Douglas -fir	Ponderosa Pine	Lodgepole Pine	Spruce	Tamarack	Miscellaneous [a]
Specific Gravity [b]	0.5000	0.4000	0.4100	0.4400	0.5300	0.4560
Specie Composition[c] (%)	17.22	0.00	10.74	1.85	20.19	50.00
Specific Gravity x Specie Composition	0.0861	0.000	0.0440	0.0081	0.1070	0.2280
Weighted Specific Gravity [d]	0.4733					
Moisture Content [e] (%)	25.00					
General Density [f] (lb/ft^3)	37.4					
Volume Per Cord (ft^3)	100.00					
Weight Per Cord [g] (kg/cord)	1,696.46					

[a] Mix of wood type burned according to the Missoula RWBS, calculated weighted averages.
[b] Wood handbook: Wood as an engineering material; specific gravity is unitless (10)
[c] Residential Wood Burning Survey For Missoula, Montana (7)
[d] Sum of specific gravity multiplied by species composition (unit less).
[e] Assumption.
[f] Wood handbook: Wood as an engineering material, Table 4-6b, via linear interpolation (10)
[g]Based on the following calculation: (37.4000 lb/ft. ^{3})(100.0000 ft. ^{3}/cord)(0.4536 kg/lb)= 1,696.46 kg/cord. The wood burning survey estimated 8,895 total cords of wood were burned in Missoula greater urban area during 1996. Using the conversion factor of 1,696.46kg/cord, approximately 15,090,011.7 kilograms of wood was burned in greater Missoula urban area during the 1995 - 1996 winter season. Variance may occur due to rounding conventions.

The overall weight of the wood burned in the E.I. area was 1,696.46 kilograms per cord of wood burned. However, the wood burning survey used a composite unit weight of 1,743.36 kg per cord weight. The reason for the difference was the selected specific gravity of the "Miscellaneous" class of the wood specie, which was 0.50 for the RWBS analysis. Since the weight of the wood burned by each device was based the number of cords burned, the amount of wood per device had to be modified by dividing by the old composite cord weight (1,743.36) and multiplying by the new one (1,696.46), which was about 3 percent lower.

3.1.4 Total Amount Of Wood Burned In The E.I. Area

The new distribution of the devices for year 2010 was multiplied by the average amount of wood burned per device to calculate the amount of wood burned in the Missoula MA during 2010. The number of devices and quantities with percentages of wood burned by stove type during the 1996 and 2010 in Missoula non-attainment area is listed in Table 3.1.4.

Table 3.1.4. 1996 and 2010 Number of devices and quantities of wood burned by stove type in the 2010 Missoula CO emission inventory area

Device Category	1996 Amount of wood burned per device (kg-dry wood)	2010 Remaining devices in MA	2010 Total amount of wood burned (kg-dry wood)	2010 Percentage wood burned (%)[a]
Fireplaces	1,826.40	2105	3,844,576.70	42.59
Catalytic Pre-phase I	0.00	0	0.00	0.00
Catalytic Phase I	0.00	0	0.00	0.00
Catalytic Phase II	3,381.41	163	551,169.29	6.11
Conventional	3,844.52	545	2,095,261.78	23.21
Non-catalytic Pre-phase I	852.97	41	34,971.71	0.39
Non-catalytic Phase I	845.35	162	136,947.15	1.52
Non-catalytic Phase II	4,670.28	324	1,513,171.73	16.76
Masonry Heater	1,705.94	81	138,180.90	1.53
Pellet	1,595.49	447	713,182.92	7.90
Total	**18,722.35**	**3,868**	**9,027,462.18**	**100**

[a] Variance may occur due to rounding conventions.

In 2010, there were about 9,023,490 total kilograms of wood burned in the Missoula E.I. area.

3.1.5 Residential Wood Burning Emissions

The amount of wood burned per device type in the Missoula CO MA was multiplied by the appropriate emission factor to calculate CO emissions.

Example for Non-catalytic Phase I Stoves in the emission inventory area:

Amount of wood burned by Non-catalytic Phase I Stoves = 136,947.15 kg dry-wood (Table 3.1.4-1)

CO emission factor from AP-42 = 115.4 g/kg-dry wood (Table 3.1.1-1).

(136,947.15 kg-dry wood)(CO Emission Factor 115.4g/kg-dry wood) = 15,803.70 kg CO

3.1.6 Seasonal and Temporal Apportionment

The amount of wood burned by the resident population depends on the ambient temperature. Low temperatures increase the likelihood of burning wood for home heating and the number of heating degree-days (HDD) accounts for this factor. For this inventory, the heating degree-days were computed for each month. The data was obtained from local climatological data collected at the Missoula International Airport weather station, because it is the nearest weather station to the CO MA. Climate data were obtained from the Midwestern Regional Climate Center cli-MATE Database http://mrcc.isws.illinois.edu/CLIMATE/.

For January, February and December, there were 3,384 heating degree-days. By dividing the HDD for this winter season by the annual 2010 HDD, a percentage of the HDD for this season can be computed.

$$\left(\frac{3,385}{7,346}\right)(100) = 46.08\%$$

This percentage of wood stove emission in winter was then multiplied by the total annual wood burning emissions per device. This reflects the actual weather conditions that occurred during the winter season.

(29,487.56 kg CO from Catalytic Phase II Stoves)(0.4608) = 13,587.87 kg CO/winter

The seasonal emissions were then divided by the number of days in the winter 2010 months (n=90) to determine the wood burning emissions on a winter day.

13,587.87 kg CO/90 days = 150.98 kg CO/day from catalytic phase II stoves in the MA

3.1.7 Summary of Residential Wood Burning Emissions

Table 3.1.7 provides an overview of residential wood burning emissions for the CO MA

Table 3.1.7 Winter day CO emissions from residential wood burning in the Missoula CO MA

Device	Emission factor (g/kg dry wood)	Wood burned in MA (kg)	Total 2010 CO in MA (kg)	Winter CO in MA (kg)[a]	Winter day CO in MA (kg)
Fireplaces	126.30	3,844,576.70	485,570.04	223,750.67	2,486.12
Catalytic Pre-phase I	115.40	0.00	0.00	0.00	0.00
Catalytic Phase I	52.20	0.00	0.00	0.00	0.00
Catalytic Phase II	53.50	551,169.29	29,487.56	13,587.87	150.98
Conventional	115.40	2,095,261.78	241,793.21	111,418.31	1,237.98
Non-catalytic Pre-phase I	115.40	34,971.71	4,035.74	1,859.67	20.66
Non-catalytic Phase I	115.40	136,947.15	15,803.70	7,282.34	80.91
Non-catalytic Phase II	70.40	1,513,171.73	106,527.29	49,087.78	545.42
Masonry Heater	74.50	138,180.90	10,294.48	4,743.70	52.71
Pellet	19.70	713,182.92	14,049.70	6,474.10	71.93
Total		**9,027,462.18**	**907,561.72**	**418,204.44**	**4,646.71**

[a] Winter emissions were calculated by multiplying mton CO in MA by the % winter HDD (0.4608).

3.2 ONROAD MOBILE EXHAUST

On August 17, 2007, the EPA approved the Montana SIP revisions to redesignate the Missoula, Montana carbon monoxide "moderate" nonattainment status to attainment for the 8-hour CO National Ambient Air Quality Standard (NAAQS); the associated 2000 attainment emission inventory was also approved. At the same time, the EPA approved the first of two Missoula 10-year full maintenance plans to maintain the NAAQS which included the transportation conformity motor vehicle emission budgets (MVEB) for 2000, 2010, and 2020. Lastly, the EPA also approved the periodic CO E.I.s for 1993 and 1996 (72 FR 159 46158 – 461661). All of these early emission inventories used an EPA on-road mobile emissions model called MOBILE: MOBILE5a for the 1993 and 1996 E.I.s (58 FR 7780 - 7781; February 9, 1993), and MOBILE6.2 for the 2000 E.I. (69 FR 97 28830 – 28832; May 19, 2004).

The current EPA on-road mobile emissions model is called MOVES, Motor Vehicle Emission Simulator. The latest MOVES version is MOVES2014 which was officially released on October 7, 2014 (79 FR 194 60343 - 60347). Earlier MOVES versions included MOVES2010, MOVES2010a

and MOVES2010b; these version were released in March 2, 2010 (75 FR 40 9411 – 9414), August 2010 (EPA-420-F-10-050), and April 2012 (EPA-420-B-12-001b), respectively. In February 2015, the Missoula City-County Health Department requested the Department of Environmental Quality, Air Quality Bureau (Department), to develop the on-road mobile emissions for the second 10-year CO maintenance area emission inventory. To determine these emissions, the latest EPA mobile emissions model, MOVES2014 (October 2014 release) was used for the 2010 base year. The MOVES2014 on-road mobile emissions model and relevant information are located on the EPA website: http://www.epa.gov/otaq/models/moves/index.htm. The following EPA documents were used as guidance:

- *MOVES2014 Technical Guidance: Using MOVES to Prepare Emission Inventories for State Implementation Plans and Transportation Conformity* (http://www.epa.gov/otaq/models/moves/index.htm#sip).
- *Motor Vehicle Emission Simulator (MOVES): User Guide for MOVES2014* (http://www.epa.gov/otaq/models/moves/).

The primary source of the associated 2010 Microsoft Office Excel spreadsheets for MOVES2014 input was provided by the Planning Section of the Missoula Development Services Transportation Division (Missoula Planners). The Missoula Planners developed the inputs explicitly for the Missoula CO Maintenance Area for the year 2010 for the *2012 Missoula Long Range Transportation Plan Update* (Missoula LRTP) for Missoula (12). In some cases, the MOVES2014 defaults were used as recommended by the MOVES2014 technical document.

The exhaust emission factors for CO in the MA were calculated using MOVES2014 by the Montana Department of Environmental Quality. The contact person for the MOVES2014 emission estimates is Cyra Cain (406-444-3490).

3.2.1 MOVES2014 Inputs

Through an interagency consultation process, the required MOVES inputs reflecting local existing conditions were established. These inputs are summarized below. A sample of the run specification file for the 2010 CO analysis is contained in Appendix D.

The individual MOVES2014 model inputs for the Missoula CO Maintenance Area are addressed in the following main sections: the navigation panel and the County Data Manager (CDM); the CDM allows a user to import county-specific data.

MOVES NAVIGATION PANEL:
Model: Onroad.

Scale: County.

Calculation Type: Inventory.

Time Span: Time Aggregation Level = Hour; Year = 2010; Months = January; Days = Weekdays; Hours = All hours.

In Montana, the highest CO concentrations occur weekday along roadways from on-road vehicle exhaust emissions during the wintertime under stagnant atmospheric and cold temperature conditions.
Geographic Bounds: Montana, Missoula (County).

Vehicle Equipment, On Road Vehicles: Fuels = Diesel, Gasoline, and Ethanol; Source Use Types = All vehicles types and fuel types combinations with exceptions. The following vehicle and fuel types are not in the MOVES2014 database and therefore, these vehicles were unselected: Motorcycle, Diesel; Combination Long-Haul Truck, Gasoline; Intercity Bus, Gasoline; Combination Long-Haul Truck, Ethanol; Combination Short-Haul Truck, Ethanol; Intercity Bus, Ethanol; Motorhome, Ethanol; Motorcycle, Ethanol; Refuse Truck, Ethanol; School Bus, Ethanol; Single Long-Haul Truck, Ethanol; Single Short-Haul Truck, Ethanol; and Transit Bus, Ethanol. The public transit buses in the Missoula area do not use compressed natural gas (CNG) as fuel due to the extra expense of the bus modifications and fuel storage tanks which was considered economically unviable. The MOVES model always assumes there are CNG buses in the vehicle fleet so the Alternative Fuels & Technology (AVFT) table was modified as discussed in the fuels input file section.

Road Type: Road types: All: (1) Off-Network to account for start and idling emissions, (2) Rural Restricted Access, (3) Rural Unrestricted Access, (4) Urban Restricted Access or interstate, and (5) Urban Unrestricted Access. Restricted roads have limited access and unrestricted can represent arterials, collectors, and/or local roads.

Pollutants and Processes: CO

- Start Exhaust (MOVES process ID 2 for MOVES Road Type 1)
- Crankcase Start Exhaust (MOVES process ID 16 for MOVES Road Type 1)
- Crankcase Extended Idling (MOVES process ID 17 for MOVES Road Type 1)
- Extended Idling (MOVES process ID 90 for MOVES Road Type 1)
- Auxiliary Power Exhaust (MOVES process ID 91 for MOVES Road Type 1)
- Running Exhaust (MOVES process ID 1 for MOVES Road Types 2 - 5)
- Crankcase Running Exhaust (MOVES process ID 15 for MOVES Road Types 2 - 5)

Manage Input Data Sets: NONE; the County Data Manager was used.

Strategies: NONE; currently, the state does not have a retrofit emissions control equipment program and rate of progress only applies to SIP analysis for certain ozone nonattainment areas.

Output: General Output: Mass Unit = Grams; Distance = Miles. Activity = Distance Travelled, Population. Output Emission Detail: Hour, County; for All Equipment/Fuel Categories = Emission Process; On Road = Road Type.

Advanced Performance Features: NONE; not required for SIP or regional transportation conformity and is used for long model runs times.

MOVES COUNTY DATA MANAGER (CDM):
Age Distribution and Source Type Population: The Missoula Planners developed these MOVES inputs using the 2011 Missoula County vehicle registration data; MDEQ assumed that the county registration year 2011 was identical to the 2010 registration year. Two common vehicle types existed between the county data and MOVES source types: motorcycle and passenger car. In the county registration database, four different weights were recorded: Gross Vehicle Weight (GVW), Gross Curb Weight, Vehicle Weight, and Declared Gross Vehicle Weight. Only certain groups of weight data were available for different vehicles. The Missoula Planners developed each registration dataset into the MOBILE6 16 vehicle classes based on maximum of available weights then further divided the data into 28 vehicle categories based on maximum available weight and fuel type. Finally, the dataset was further delineated into the 25 model year (MY) MOBILE6 age categories. The vehicles 1986 MY and older vehicles were classified as group 24, then sequentially to group 0 (newest) which contained the 2010 and 2011 MY vehicles. Using an EPA worksheet tool, the 25 MOBILE6 age distribution dataset was converted into the MOVES 31 MY age categories and 13 vehicle types. The worksheet tool, RegistrationDistributionConverter_Veh16, was obtained from the following EPA MOVES tools website: http://www.epa.gov/otaq/models/moves/tools.htm#mobile6inputs.

Although there were more age classes in the MOVES age distribution profile, the oldest 3 to 4 age classes (28 through 30) were generally represented by zeros (0) from the normalization of the data in the previous MY classes. In addition, the previous MOVES model registration vehicle classes divided the light-duty vehicles into two classes: passenger cars (ID = 20) and 2-axle, 4-tire trucks (ID = 30). MOVES2014 combines these categories into a single light-duty category (ID = 25). MDEQ modified the Missoula Planners MOVES2010a input file to reflect this change. The data was also modified in another manner. The MOVES defaults age distributions were applied for the single unit and combination long-haul trucks (MOVES source IDs 53 and 61) as recommended by EPA (Chris Dresser, personal communications, June 15, 2015); these age distributions were found on the MOVES tools page and incorporated into this MOVES2014 input file.

Average Speed Distribution (speed distribution by road type, hour, and vehicle type): The Missoula Planners used a county travel model, TransCad™ version 4.5, to develop the total vehicle hours travel (VHT) data. The TransCad™ transportation planning software was developed by Caliper, Inc. The distribution of VHT by speed, time of day, and roadway classification were determined by the model whereas the distribution of the vehicle type was assumed to be uniform for all vehicle types. For these variables, the Missoula Planners MOVES2010a input file was used.

Fuel Supply, Formulation, Usage Fraction, and AVFT: Urban Missoula has a wintertime oxygenated fuel program required for the Missoula CO Maintenance Area (6); oxygenated fuel is sold in Missoula from November 1 through February 28, so ethanol was the dominate fuel

type for the vehicles using gasoline since modeling was conducted to represent a January weekday. With USEPA assistance, the model inputs for the fuel supply and usage fractions are noted in Tables 3.2.1-1 and 3.2.1-2; the fuel formulations are listed in Appendix C.

Table 3.2.1-1 Missoula maintenance area fuel supply

Fuel region ID	Fuel year ID	Month group ID	Fuel formulation ID	Fuel type	Market share[a]	Market share CV[b]
500000000[c]	2010	1[d]	2617	Gasoline (E-0)	0	0.5
500000000	2010	1	2619	Gasoline (E-10)	1	0.5
500000000	2010	1	25001	Diesel	1	0.5
500000000	2010	1	27001	E-85	1	0.5
500000000	2010	1	28001	Compressed Natural Gas	1	0.5

[a] Market Share is the fraction of each fuel formulation volume consumed in the area.
[b] CV = coefficient of variation of the market share. This would be used if uncertainty calculations were enabled; a value is not required for MOVES and may be left blank.
[c] Rocky Mountain region.
[d] 1 = January

Table 3.2.1-2 Missoula CO maintenance area fuel usage

County ID	Fuel year ID	Source bin fuel type ID	Fuel supply fuel type ID	Fuel type	Usage fraction
30063[a]	2010	1	1	Gasoline	1
30063	2010	2	2	Diesel	1
30063	2010	3	3	Compressed Natural Gas	1
30063	2010	4	4	Liquid Propane Gas	1
30063	2010	5	1	E-85	0.987697
30063	2010	5	5	E-85	0.012303
30063	2010	9	9	Electricity	1

[a] State (30) and Missoula County codes (063).

As discussed previously, the public transit buses in the Missoula area do not use CNG as fuel. The applicability of CNG was evaluated but due to the extra expense of the bus modifications and fuel storage tanks, it was considered economically unviable. As noted previously, the MOVES model assumes there are CNG buses in the fleet unless the AVFT table in the fuels input file is manually changed. The Department modified this file by setting this fuel usage to zero (0) in the transit bus source type and redistributing its original fuel fraction usage to the other fuel types (gasoline and diesel) proportionally so the total fuel faction equaled to one (1).

Meteorological Inputs: Ambient air temperature and relative humidity data were required for MOVES input. The daily minimum (25.1 degrees Fahrenheit, ° F) and maximum ambient (44.3° F) temperature data from the Missoula International Airport National Weather Station for the

month of January 2010 was obtained from the following website: http://cdo.ncdc.noaa.gov/qclcd/QCLCD. The EPA tool Meteorological Data Converter Mobile6 spreadsheet was obtained from the tool website which developed the MOVES2014 meteorological data for a 24-hour period. The relative humidity profile was set arbitrarily to 50% since the indirect effects through air conditioning adjustment on the CO emissions estimated by MOVES are unaffected at temperatures less than or equal to 75° F (http://www.epa.gov/ttnchie1/conference/ei19/session6/choi.pdf).

Ramp Fraction: The MOVES model ramp default is 8% on the urban restricted (interstate) road vehicle hours traveled. However, transportation modeling conducted for the Missoula LRTP document had various vehicle hours traveled data for ramps for the year 2010. The most conservative (highest) was for the Missoula Metropolitan Organization study area which was 2.55%. Assuming this percentage was representative for the Missoula CO Maintenance Area for the same year, a 3% ramp fraction was applied in the MOVES modeling.

Road Type Distribution: This variable pertains to the fraction of source (vehicle) type vehicle miles traveled (VMT) on different road types. The Missoula Planners developed this information which was used as input into MOVES.

Source (Vehicle) Type Distribution: The Missoula Planners MOVES2010a input file was used.

Starts: No local data were available; the MOVES2014 default file was used.

Vehicle Type VMT (HPMSVTypeYear, monthVMTFraction, dayVMTFraction, and hourVMTFraction): These parameters describe how much a vehicle type travels on public roads. The MOVES AADVMT (annual average daily vehicle miles traveled) converter tool on the EPA tool website was used with the daily HPMS VMT by vehicle type; the Missoula Planners developed the 2010 base year data (annual VMT by vehicle type). Without additional information, MDEQ divided these values by 365 to derive the daily data. Additional input for this converter tool were: average day, no specific month, use MOVES monthly and weekend-day default adjustment factors, and rural county. This tool then calculated the annual, month, day, and hour VMT by the 5 HPMS vehicle types required for input. Using this converter also eliminated any post-processing steps (Chris Dresser, EPA, personal communications, June 15, 2015).

Hotelling: The MOVES2014 defaults were used.

I/M Programs (IMCoverage): NONE; a state vehicle Inspection and Maintenance (I/M) program has never existed in the state.

Retrofit Data: The state does not have a retrofit program and since the MOVES2014 model database does not contain any national default data for this variable, none was applied.

3.2.2 Onroad Mobile Exhaust Results

The MOVES2014 modeling results for the Missoula CO Maintenance Area are listed in Table 3.2.2 and the corresponding MOVES2014 run specification file is listed in Appendix D.

Table 3.2.2 2010 Missoula CO maintenance area MOVES2014 modeling results

Road type	MOVES road type	MOVES process	Description	CO (kg per wintertime weekday)
Off-Network	1	2	Start exhaust	17,891.72
		16	Crankcase Start	12.20
		17	Crankcase Extended Idle Exhaust	0.13
		90	Extended Idle Exhaust	14.61
		91	Auxiliary Power exhaust	0.08
Rural Interstate	2	1	Running Exhaust	525.62
		15	Running Crankcase Start	0.70
Rural Arterial, Collector, and Local	3	1	Running Exhaust	1,044.09
		15	Running Crankcase Start	1.41
Urban Interstate	4	1	Running Exhaust	796.34
		15	Running Crankcase Start	1.08
Urban Arterial, Collector, and Local	5	1	Running Exhaust	7,108.06
		15	Running Crankcase Start	10.09
Total				**27,406.13**

3.3 NATURAL GAS COMBUSTION

Natural gas was used to heat residential and commercial buildings in Missoula during 2010. The NorthWestern Energy Corporation (NorthWestern) is the only natural gas distributor in the CO MA. NorthWestern personnel identified the amount of natural gas usage within the Missoula City limits for January, February and December 2010. This data was used to calculate daily winter consumption of natural gas usages in the E.I. area.

3.3.1 Emission Factors

The CO emission factors for natural gas were obtained from AP-42, which listed 40 lb/(10^6 scf) (lb = pounds; scf = standard cubic feet) for residential consumption and 84 lb/(10^6 scf) for commercial/industrial boilers (13). The commercial/industrial emission factor was used for the "transportation" class of natural gas users provided by Northwestern Energy, because the users include large facilities such as the University of Montana and St. Patrick's Hospital. The data from NorthWestern was given in decatherms, which was equivalent to one million British Thermal Units (BTU). Therefore, the natural gas consumption data were converted to the

emission factor units (scf) by dividing by 1,000. Finally, another conversion factor (0.4536 lb/kg) was used with the emission factors to obtain the desired reporting units (kg CO).

3.3.2 Source Activity Levels

NorthWestern provided the amount of natural gas used by residential and commercial customers inside Missoula City limits for each winter month of 2010. Data for the city of Missoula were used to calculate emissions because natural gas consumption data specifically for the MA were unavailable. In addition, the MA overlaps extensively with the city of Missoula.

3.3.3 Temporal Apportionment

CO emissions for a winter day were calculated by dividing the total winter emissions by 90 days.

Table 3.3.3. Winter natural gas combustion CO emissions

Utility	Winter natural gas usage (10^6 scf)	Winter natural gas CO emissions (kg CO)	Winter day CO emissions from natural gas combustion (kg CO/day)
Residential	1,053.53	19,114.82	212.39
Commercial	593.52	22,613.97	251.27
Industrial	5.82	221.91	2.47
Transportation	515.27	19,632.72	218.14
Total	**2,168.14**	**61,583.42**	**684.27**

3.4 NONROAD GASOLINE AND DIESEL EXHAUST

Nonroad mobile sources include off-highway vehicles and engines that move or are moved within a 12-month period (14). Nonroad mobile sources are vehicles and engines that fall under the following categories:

- Agricultural equipment, such as tractors, combines and balers;
- Airport ground support equipment, such as baggage tugs and terminal tractors;
- Commercial equipment, such as generators and pumps;
- Industrial equipment, such as forklifts and sweepers;
- Construction and mining equipment, such as graders, back hoes and trenchers;
- Lawn and garden equipment, such as leaf blowers and lawn mowers;
- Logging equipment;
- Recreational marine, such as power boats and personal watercraft;
- Railway maintenance equipment, such as rail straighteners;
- Recreational equipment, such as all-terrain vehicles and off-road motorcycles;
- Underground mining and oil field equipment; and
- Aircraft, such as jet and piston engines

The MDEQ Air Quality Bureau applied the EPA NONROAD version 2008a model to determine the 2010 wintertime weekday 24-hour CO emissions in Missoula County from five nonroad mobile source categories: Commercial, Construction, Industrial, Lawn and Garden (residential and commercial), and Railroad Maintenance. The months composing the 2010 winter season were January, February, and December.

Seven equipment classes were not included in this inventory:

Commercial Marine:	There were no water bodies within the emission inventory area in 2010.
Recreational Marine:	There were no water bodies within the emission inventory area in 2010.
Agriculture:	There were no agricultural areas within the emission inventory area in 2010.
Airport Service:	There were no airports within the emission inventory area in 2010.
Logging:	There were no logging areas within the emission inventory area in 2010.
Recreational:	There were no snowmobile or all-terrain vehicle (ATV) trails within the emission inventory area in 2010 and golf carts would see limited use in the winter months.
Mining:	There were no underground mines or oil fields within the emission inventory area in 2010.

The emissions model required the following fuel inputs: Reid Vapor Pressure (RVP), oxygen weight percentage, gas and diesel sulfur content percentages, ethanol blend market share, and ethanol volume percentage. The fuel RVP, oxygen weight percentage, and ethanol market share and volume percentage model inputs were obtained from the mobile emissions model inputs for the *2012 Missoula Long Range Transportation Plan* (12). The MDEQ gathered the sulfur percentages in the gas and diesel internally (Howard Haines, Montana Department of Environmental Quality, personal communications, February 19, 2014). Another fuel composition variable, the CNG/LPG sulfur percentage, was required and the default NONROAD percentage was used.

Ambient temperatures were also required: the minimum, maximum, and average. From the National Oceanic and Atmospheric Administration (NOAA), National Climatic Data Center, website, 2010 January, February, and December ambient temperature data collected at the Missoula International Airport were downloaded (http://cdo.ncdc.noaa.gov/qclcd/QCLCD?prior=N). The weekend data were eliminated to calculate the wintertime weekday minimum, maximum, and average ambient temperatures. The resulting model inputs for all of these variables were as follows:

Fuel RVP for gas: 12.5
Oxygen Weight %: 3.4
Gas sulfur %: 0.003
Diesel sulfur %: 0.0015
Marine Diesel (Dsl) sulfur %: 0.0435 (Not used; default)

CNG/LPG sulfur % : 0.003 (default)
Minimum temp. (F): 20.19
Maximum temp. (F): 34.23
Average temp. (F): 27.49
Ethanol (EtOH) Blend % Mkt: 99.94
EtOH Vol %: 10.0

The model calculated the 2010 Missoula County CO emissions for each emitting equipment within each source category in tons per wintertime weekday then the emissions were converted into kilograms of CO per day in various Excel workbooks.

Spatial allocation factors were developed (based on EPA guidance documents) to apportion nonroad emissions to the CO maintenance area. The approaches used are described in each section of this chapter. In many cases, zip code data were obtained from the 2010 Zip Codes Business Patterns (15). Zip codes 59801, 59802, 59804 and 59808 were chosen for analysis as representative of the CO MA. These zip codes exceed the MA in area, and as a result, CO emissions from these data provided a conservative estimate of MA CO emissions.

3.4.1 Commercial Equipment

Winter weekday emissions from commercial equipment in Missoula County were calculated using EPA's NONROAD model, as described in Section 3.4. Winter weekday emissions for the CO maintenance area for this category were derived by applying the ratio of wholesale trade establishments (16) in nonattainment area zip codes (59801, 59802, 59804 and 59808) (15) to Missoula County-level totals from the 2010 U.S. Census Business Patterns for Missoula County (17).

CO MA emissions from commercial equipment	=	Total Missoula County CO emissions from commercial equipment	x	Wholesale establishments allocation factor
	=	3,333.72 kg CO/day	x	86.29%
	=	2,876.67 kg CO/day		

Table 3.4.1 Typical winter day CO emissions (kg/day) from commercial equipment usage

Area	CO (kg/day)
Missoula County	3,333.72
Missoula CO MA	2,876.67

3.4.2 Construction Equipment

Winter weekday emissions from construction equipment in Missoula County were calculated using EPA's NONROAD model as described in Section 3.4. Winter weekday emissions for the CO maintenance area for this category were derived by applying the ratio of construction

employment in the maintenance area zip codes to Missoula County-level totals (17) as a conservative estimate, as the Emission Inventory Improvement Program (EIIP)-recommended allocation factor of total dollar value of construction was unavailable (16). The Zip Code Business Patterns database provided the number of industry establishments by employment-size class in 2010. To estimate the number of construction employees in a zip code, the number of establishments in an employment-size class was multiplied by the median of the size class. The results for each size class were then added together to estimate the total number of employees.

For example, in zip code 59801 there 106 construction establishments in 2010.

Table 3.4.2-1. Number of construction establishments in zip code 59801 by employment-size class

Industry	Number of Establishments by Employment-size class								
	1-4	5-9	10-19	20-49	50-99	100-249	250-499	500-999	1000 or more
Construction	71	25	8	1	1	0	0	0	0

Estimated Zip 59801 Construction employees = (71x2.5)+(25x7)+(8x14.5)+(1x34.5)+(1x74.5)
= 577.5

Table 3.4.2-2 Typical winter day CO emissions (kg/day) from construction equipment usage

Area	CO (kg/day)
Missoula County	428.88
Missoula CO MA	401.17

3.4.3 Industrial Equipment

Winter weekday emissions from industrial equipment in Missoula County were calculated using EPA's NONROAD model, as described in Section 3.4. Winter weekday emissions for the CO maintenance area for this category were derived by applying the ratio of manufacturing employment in the maintenance area to Missoula County-level totals as recommended by EIIP guidance (16). Manufacturing data for Missoula County were obtained from the County Business Patterns database (17). The Zip Codes Business Patterns database (15) was used to determine MA-level manufacturing employment data, using methods described in section 3.4.2.

Table 3.4.3 Typical winter day CO emissions (kg/day) from industrial equipment usage

Area	CO (kg/day)
Missoula County	415.59
Missoula CO MA	370.83

3.4.4 Lawn and Garden Equipment

Winter weekday emissions from lawn and garden equipment in Missoula County were calculated using EPA's NONROAD model, as described in Section 3.4. Because this emission inventory is for a winter day in a largely urban area, only emissions from snow blowers and chain saws (for cutting firewood) were evaluated. Lawn and Garden emissions were calculated on both the commercial and residential scales.

EIIP guidance recommends using landscaping employee data to allocate commercial lawn and garden emissions (16). However, the employment data for landscape employees derived by the zip-code method (previously described) exceeded the number of landscape employees in Missoula County. Therefore, maintenance area commercial lawn and garden equipment emissions were derived by applying the ratio of the population in the maintenance area to Missoula County-level totals. Missoula City population data were used as a surrogate for the MA population because MA population data were unavailable and the MA closely resembles the Missoula City limits. Population data for the City and County were obtained from the 2010 U.S. Census (4).

Table 3.4.4-1 Typical winter day CO emissions (kg/day) from commercial lawn and garden equipment usage

Area	CO (kg/day)
Missoula County	375.64
Missoula CO MA	229.55

Housing unit data were used to determine residential winter weekday lawn and garden CO emissions as recommended by EIIP guidance (16).

Table 3.4.4-2 Typical winter day CO emissions (kg/day) from residential lawn and garden equipment usage

Area	CO (kg/day)
Missoula County	364.83
Missoula CO MA	297.96

3.4.5 Railway Maintenance Equipment

Winter weekday emissions from railway maintenance equipment in Missoula County were calculated using EPA's NONROAD model, as described in Section 3.4. Winter weekday emissions for the CO maintenance area for this category were derived by applying the ratio of population in the maintenance area to Missoula County-level totals, as locomotive NOx emissions data recommended by EIIP guidance (16) were unavailable. Missoula City population data were used as a surrogate for the MA population because MA population data were unavailable and the MA closely resembles the Missoula City limits.

Table 3.4.5 Typical winter day CO emissions (kg/day) from railway maintenance equipment usage

Area	CO (kg/day)
Missoula County	47.91
Missoula CO MA	29.28

3.5 RAILROAD LOCOMOTIVE EXHAUST

The Missoula CO MA includes a railyard, a stretch of East-West railroad that sees significant traffic, and an infrequently used North-South railroad. In 2010, the Burlington Northern and Santa Fe Railway Company (BNSF) generated the primary rail activity in the Missoula CO MA. However, the Montana Rail Link (MRL) managed all of the trains, including those operating under the BNSF through contract agreements. Two locomotive activities occurred in the Missoula CO MA: line haul and yard (or switch). These locomotive activities fall under the nonroad mobile area source category, but the emissions were not calculated using the modeling discussed in Section 3.4.

3.5.1 CO Emissions

In the 2000 Missoula CO E.I., railroad locomotive exhaust for line haul and yard locomotives contributed 26.34 kg CO/day to the CO MA (2). The 2000 CO E.I. included railroad transportation growth factors through 2010 (Table 3.5.1-1).

Table 3.5.1-1 Montana railroad transportation growth factors: 1999-2010

Year	Montana railroad transportation growth factors
1999	1.199
2000	1.249
2002	1.322
2005	1.433
2007	1.500
2008	1.533
2010	1.600

These growth factors were applied to the 2000 railroad locomotive exhaust CO emissions to determine 2010 CO emissions from locomotive exhaust. To determine the growth of the CO emissions from the 2000 base year, the following equation was applied.

$$GAF_{2010}=(GF_{2010})/(GF_{2000})$$

GAF_{2010}	=	Growth Adjustment Factor for Year 2010
GF_{2010}	=	Growth Factor for Year 2010
GF_{2000}	=	Growth Factor for Base Year 2000

The resulting GAF_{2010} was multiplied by the 2000 CO season day emissions for railroad locomotive activity within the Missoula CO MA to derive the projected emissions for 2010.

Table 3.5.1-2 Typical winter day CO emissions (kg/day) from railroad locomotive exhaust

Category	Typical winter day (kg CO)
Locomotive emissions	**33.74**

References

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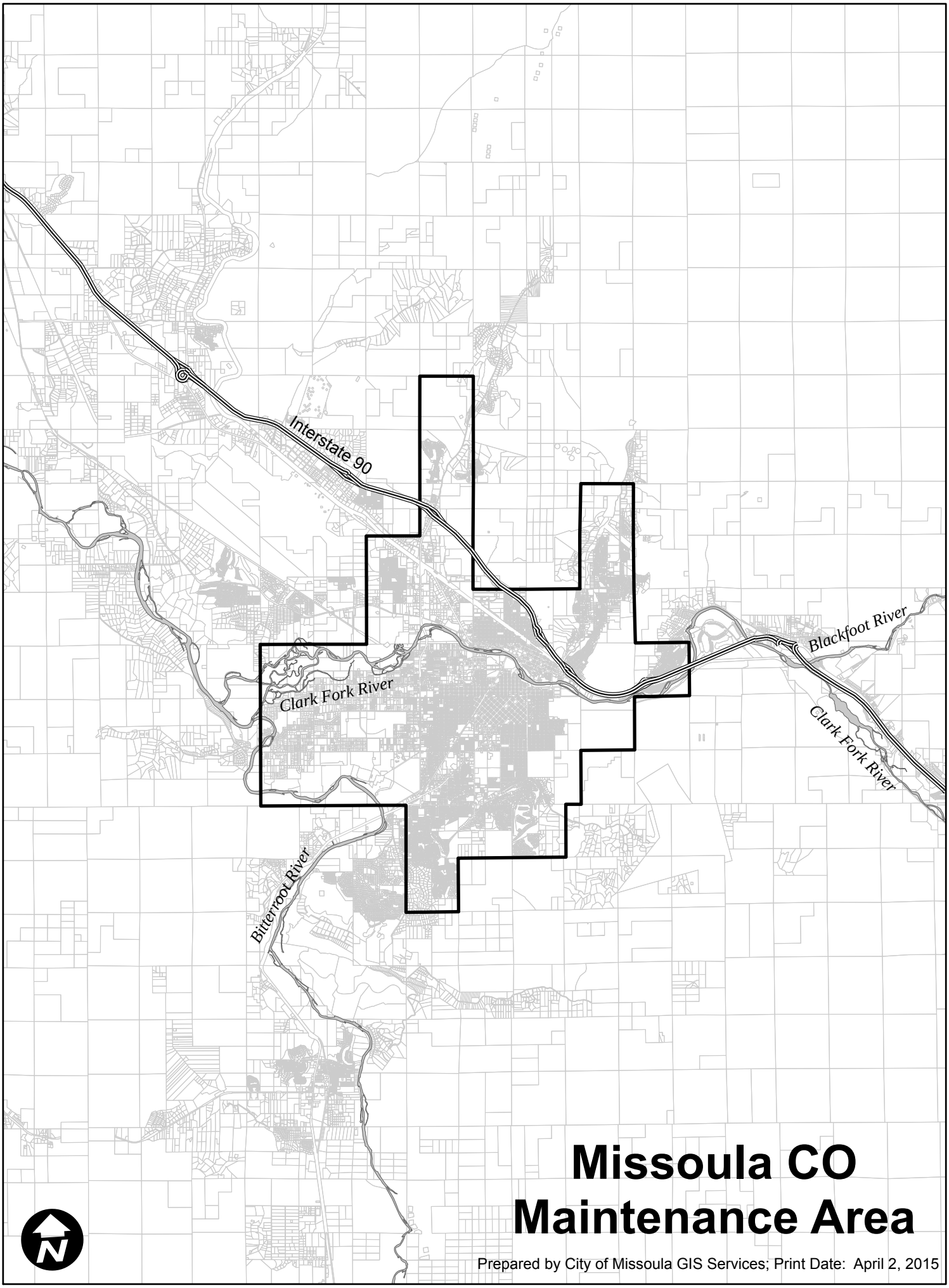
15. **U.S. Census.** Zip Code Business Patterns. [Online] http://www.census.gov/econ/cbp/index.html.

16. **USEPA.** *Geographic Allocation of State Level Nonroad Engine Population Data to the County Level.* EPA Office of Transportation and Air Quality. 2002. EPA420-P-02-009.

17. **U.S. Census.** County Business Patterns. [Online] http://www.census.gov/econ/cbp/index.html.

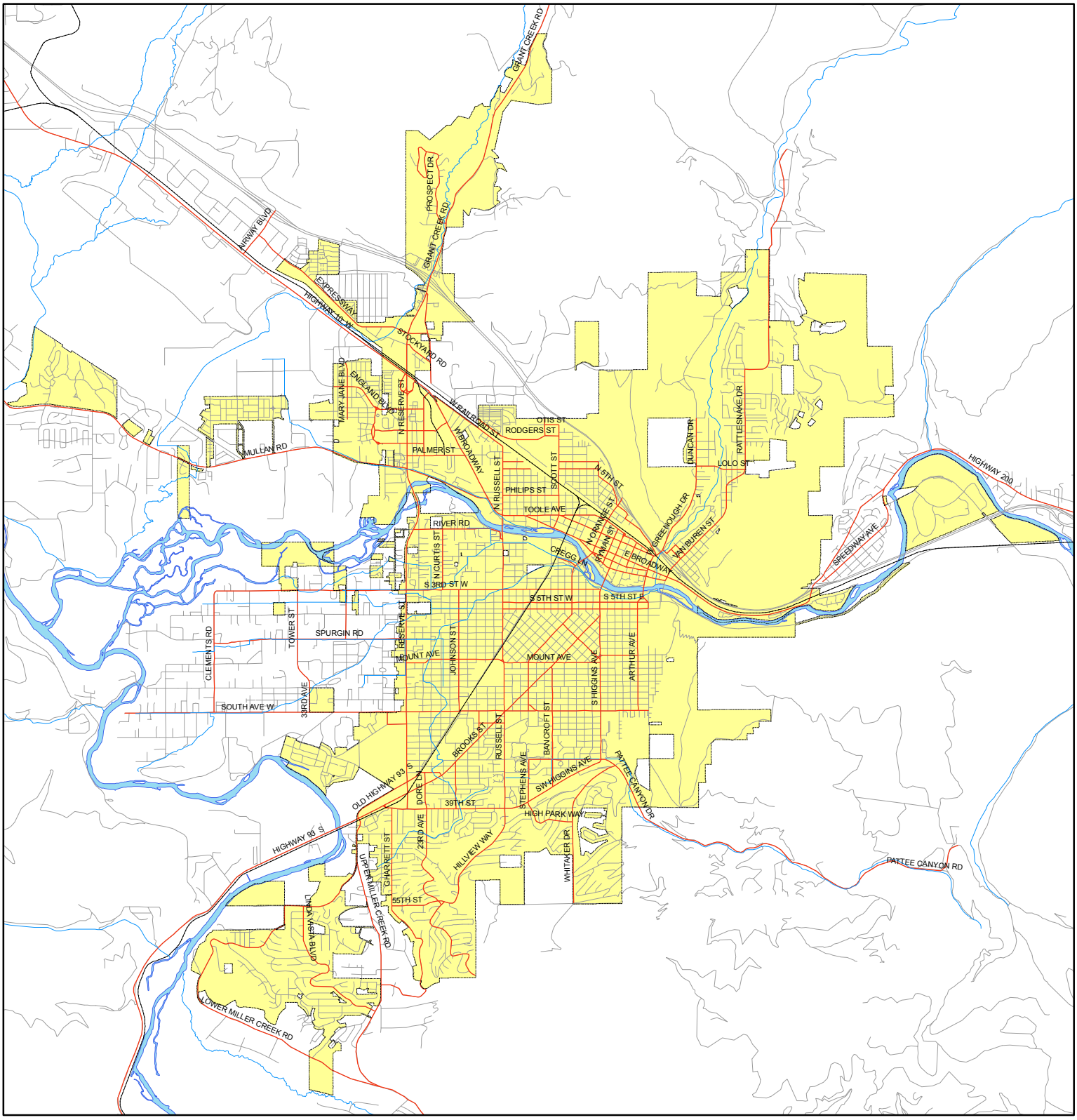
Appendix C-1: Map of Missoula CO Maintenance Area



Missoula CO Maintenance Area

Prepared by City of Missoula GIS Services; Print Date: April 2, 2015

Appendix C-2: Map of Missoula City Limits



CITY OF MISSOULA, MONTANA - CITY LIMITS MAP

City Limits as of:
February 24, 2014

0 0.5 1 2 Miles

29.2 Square Miles
18,708 Acres
814,932,056 Square Feet

Printing Date: Thursday, February 27, 2014
File: CityMap_8.5x11_PDF.mxd
Prepared By: GIS Services

Appendix C-3: MOVES2014 Fuel Formulation for the Missoula CO Maintenance Area

Appendix C-3: MOVES2014 Fuel Formulation for the Missoula CO Maintenance Area.

Fuel Formulation ID	2617 Gasoline	2619 Ethanol	25001 Diesel	27001 E-85	28001 Compressed Natural Gas
Fuel Subtype ID	10	12	20	51	30
RVP[a]	11.68	12.68	0	10.50	0
Sulfur Level	45.77	45.77	15.00	8.00	7.60
ETOH Volume[b]	0	10	0	74	0
MTBE Volume[c]	0	0	0	0	0
ETBE Volume[d]	0	0	0	0	0
TAME Volume[e]	0	0	0	0	0
Aromatic Content	25.44	21.79	0	0	0
Olefin Content	8.75	6.68	0	0	0
Benzene Content	1.61	1.61	0	0	0
e200[f]	50.07	54.95	0	49.90	0
e300[g]	86.65	87.19	0	89.50	0
BioDiesel Ester Volume	0	0	0	0	0
Cetane Index	0	0	0	0	0
PAH Content[h]	0	0	0	0	0
T50[i]	198.70	188.74	0	200.00	0
T90[j]	308.95	306.5	0	300.00	0

[a] RVP = Reid Vapor Pressure.
[b] ETOH Volume = Ethanol Volume.
[c] MTBE Volume **=** Methyl tertiary butyl ether Volume.
[d] ETBE Volume = Ethyl tert-butyl ether Volume.
[e] TAME Volume = Tertiary amyl methyl ether Volume.
[f] e200 = Percent of fuel evaporated at 200 degrees Fehrehenhuit.
[g] e300 = Percent of fuel evaporated at 300 degrees Fehrehenhuit.
[h] PAH Content = Polycyclic aromatic hydrocarbons content.
[i] T50 = Distillation temperature (degrees Fehrenhiut) at 50% of fuel is evaporated.
[j] T90 = Distillation temperature (degrees Fehrenhiut) at 90% of fuel is evaporated.

Appendix C-4: MOVES2014 CO Maintenance Area Run Specification File

Appendix C-4. MOVES2014 Missoula CO Maintenance Area Run Specification File.

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Appendix C-5: Quality Assurance Plan for the 2010 Carbon Monoxide Emission Inventory in support of Missoula County's 2nd 10-year Limited Maintenance Plan for the Carbon Monoxide Maintenance Area.

Quality Assurance Plan

for the 2010 Carbon Monoxide Emission Inventory in support of Missoula County's 2nd 10-Year Limited Maintenance Plan for the Missoula Carbon Monoxide Maintenance Area

Prepared by
Sarah Coefield
Air Quality Specialist

February 2015

Missoula City-County Health Department
Missoula, Montana 59802

Contents

ABBREVIATIONS

ARMB	Air Resources Management Bureau, Montana Department of Environmental Quality
CO	Carbon Monoxide
E.I.	Emission Inventory
EIIP	Emission Inventory Improvement Program
EPA	United States Environmental Protection Agency
IDT	Inventory Development Team
MCCHD	Missoula City-County Health Department
MA	Maintenance Area
MDEQ	Montana Department of Environmental Quality
MMPO	Missoula Metropolitan Planning Organization
MT	Montana
NAA	Non-attainment Area
NAAQS	National Ambient Air Quality Standard
NEI	National Emission Inventory
PM10	Particulates with an Aerodynamic Diameter of 10 Microns (u) or Less
QA	Quality Assurance
QAP	Quality Assurance Plan
QC	Quality Control
USEPA	United States Environmental Protection Agency

1. Introduction

1.1 Purpose of Inventory

This document outlines the quality assurance plan (QAP) for Missoula City-County Health Department's (MCCHD) 2010 update to the carbon monoxide (CO) emission inventory (E.I.) for the Missoula CO Maintenance Area (MA). The emission inventory is being conducted in support of a limited maintenance plan for the Missoula CO MA. Carbon monoxide is a colorless, odorless gas that reduces blood's oxygen-carrying capacity. For the 2010 CO E.I., MCCHD will determine CO emissions from MA sources identified in the Missoula 2000 CO emission inventory. In 2004, the Montana Department of Environmental Quality (MDEQ) developed a 2000 Missoula CO emission inventory (E.I.) that included the MA in its geographic scope [1]. The 2000 CO E.I. estimated area and industrial point emissions within the Missoula urban and outlying areas, including the Missoula CO MA.

This emission inventory will be confined to the MA (Appendix A). The MA roughly follows the Missoula City limits (Appendix B), with a few variations. The current boundaries of the Missoula "Moderate" CO nonattainment area were published in the Federal Register (FR) on November 6, 1991 (56 FR 56694) and includes the areas within the following Township (T), Range (R) and Sections (S):

- T13N R19W Sections 2, 5, 7, 8, 11, 14-24, and 26-34
- T12N R19W Sections 4, 5, 6, 7
- T13N R20W Sections 23, 24, 25, 26, 35, and 36; and
- T14N R19W Sections 29 and 32

In addition, because Missoula historically exceeded the CO NAAQS in winter months, the emission inventory will be based on a winter day in 2010. Winter is defined for this E.I. as December, January and February.

1.2 Quality Assurance Policy and Objectives

The 2010 CO Missoula Nonattainment Area emission inventory is considered a Level III inventory, based on guidance provided by the Emission Inventory Improvement Program (EIIP) [2]. It is a Level III inventory because it includes site-specific data, and will not be used for rule making or strategic decision making. The end use of this inventory drives the minimum QA and work plan requirements.

In order to provide data of sufficient quality for maintenance planning needs, quality assurance and quality control procedures are implemented as part of the inventory process. The procedures address data quality objectives of accuracy, completeness, comparability and representativeness. A brief discussion of the data quality objectives and target goals is given below.

Accuracy: All estimates must be calculated and documented using acceptable methods. Individual source requirements and availability of data and resources will affect the estimation method selection.

Completeness: Completeness is addressed by ensuring that all applicable source categories are included in the inventory, and that all information required to estimate emissions is present. Applicable source categories are described in the 2010 CO Emission Inventory Plan in Support of Missoula County's Limited Maintenance Plan for the Missoula CO Maintenance Area [3].

Comparability: Data will be compared to the most recent base year inventory (the 2000 Missoula CO emission inventory [1]). Any discrepancies (data outliers) greater than 20% involving sources that made up greater than 5 % of the 2000 CO inventory will be corrected or justified.

Representativeness: Actual 2010 winter daily emissions for the Missoula CO nonattainment area will be calculated for this inventory. Local data will be used in inventory calculations wherever possible.

2.0 Program Summary

This QAP provides written instructions for the quality assurance and control aspects associated with development of the 2010 Missoula CO emissions inventory. It is designed so that QA/QC procedures are implemented throughout the whole inventory development process. This will ensure that the inventory is as complete as possible, accurate, comparable, and representative of the MA. Personnel involved with the inventory and their responsibilities are discussed in Section 3.0.

2.1 Major Program Components

Inventory tasks and QC procedures will include data checking by the inventory development team (IDT) throughout the development of the inventory and final emission report. These procedures include, but are not limited to, the following:

- The development and implementation of written procedures for data gathering, data assessment, data handling, calculation of emissions, and reporting;
- Review of all calculations for technical soundness and accuracy, including verification that the appropriate emission factors were used;
- Use of technically sound approaches when developing results;
- Documentation of the data in a manner that will allow reconstruction of all inventory development activities; and

- Maintenance of an orderly master file of all the data gathered and a copy-ready version of the final inventory submitted to the U.S. EPA.

QA activities are distinguished from QC activities in that they provide a more objective assessment of data quality because QA personnel (e.g. independent reviewers) are not directly involved in the development of the inventory. QA activities are usually more comprehensive because they include assessments of the effectiveness and appropriateness of the systems established to control data quality.

The QA program is equal in importance to inventory development and QC procedures, and includes peer review, reality checks and calculation checks conducted by an external, independent reviewer at the Montana Department of Environmental Quality.

3. Agencies Responsible for the Emission Inventory

The Missoula City-County Health Department Air Quality Division has primary responsibility for preparing and submitting the 2010 CO Emissions Inventory for Missoula County. Point sources and the majority of area source emission estimates were prepared by MCCHD. The Montana Department of Environmental Quality (MDEQ) Air Resources Management Bureau (ARMB) prepared nonroad emission estimates for the county, and MCCHD apportioned those estimates to the CO MA. The MDEQ also provided exhaust data for onroad mobile sources using data gathered by the Missoula Metropolitan Planning Organization (MMPO). Table 3.1 lists those responsible for inventory preparation and quality assurance/ quality control activities.

Table 3.1 Authors and QA/QC contacts for the 2010 Missoula PM10 emission inventory

Source	Author(s)	QA/QC contacts
Point	Sarah Coefield MCCHD (406) 258-4755	Cyra Cain MDEQ (406) 444-3490
Area	Sarah Coefield MCCHD (406) 258-4755	Cyra Cain MDEQ (406) 444-3490
Nonroad Mobile Sources	Sarah Coefield MCCHD (406) 258-4755 Cyra Cain MDEQ (406) 444-3490	Kristen Martin MDEQ (406) 444-3490
Onroad Mobile Sources	Sarah Coefield MCCHD (406) 258-4755 Cyra Cain MDEQ (406) 444-3490	Kristen Martin MDEQ (406) 444-3490

4. General QA/QC Procedures

QA/QC procedures described in this QAP were developed to help ensure data accuracy, completeness, representativeness, and comparability. These procedures will be implemented throughout the planning, data collection, emission estimation, and reporting phases of the inventory development program.

4.1 QC Activities

QC procedures will be implemented by the IDT during inventory development to meet the technical and data quality objectives. These activities will be conducted at critical steps in the inventory development process where the successful outcome of inventory development could be compromised. These critical steps are presented below and discussed in the following subsections of this QAP:

- Data gathering;
- Data documentation;
- Calculating emissions;
- Data checking;
- Reporting; and
- Maintenance of the master file.

4.1.1 Data Gathering

Data gathering will be conducted according to U.S. EPA-approved procedures. The approach and supporting documents or references will be thoroughly documented and included in the emissions report.

Data for area source emission calculations will be gathered from a wide universe of resources. Whenever applicable, local surveyed data (such as annual emissions reports) will be used, as this data best reflects activity in the county and the maintenance area. When local data is not available, state data from state agencies (such as the Montana Department of Transportation) will be used. National-level data (such as those from the US Census Bureau) will be used when no local, state or regional data is available. In addition, the most recent EIIP guidance for area sources will be consulted for direction in determining the most relevant data source for use in emissions calculations.

Data for point source emissions will be gathered from the sources' air quality permits.

4.1.2 Data Documentation

All data used in this inventory will be tracked on a spreadsheet that identifies the data source, and where and how it was used in the emission inventory. In addition, all spreadsheets used for emission calculations will list the data sources used for the calculations, so the data can be checked for entry and use errors. Emission calculation spreadsheets will include units of measurement with each data value. Each revision of an inventory spreadsheet that occurs after QA/QC activities will be labeled with that day's date, and old versions of the spreadsheet will be kept in an archived folder. All spreadsheets, calculations and references will be maintained by the Inventory Director/QA Coordinator (Sarah Coefield 406-258-4755) in a master folder that is backed up on Missoula County servers.

When reporting emissions, the following will be upheld: complete descriptions of all data sources will be included; units of measurement will be provided for each data value; an explanation will be provided for emission sources that are omitted from the final inventory; the procedures used to calculate emissions will be described and example calculations will be provided; and documents from which emission factors are taken will be identified and referenced.

4.1.3 Calculating Emissions

Information on how point, area and mobile sources will be calculated is provided in the 2010 CO Emission Inventory Plan in Support of Missoula County's Limited Maintenance Plan for the Missoula CO Maintenance Area [3].

4.1.4 Data Checking

Data checking is used to ensure data accuracy. Data will be checked at logical steps in the development of the inventory where transcription or calculation errors are likely to be found. Data checking will also be used to assess the technical soundness of the data

Although different types of data will be reviewed at each checkpoint, the type of review may also vary. For example, when a document containing information is first received and logged in, it will first be checked to see if it was generated in the correct year and is for the correct location. Later, as data are used in calculating emissions, checking will include evaluations of data accuracy, reasonableness, and completeness.

The most logical checkpoints for each review are after data entry and calculations are performed. Data can be checked by the Inventory Director/QA Coordinator, another IDT member or a technical reviewer. If errors are found during these reviews, the person generating the data and reviewer must agree on the corrective action to be taken and see to it that the error is eliminated. They must also determine the impact, if any, that the error will have on other relevant data, and revise the affected data accordingly.

4.1.5 Reporting

The emissions inventory report will be formatted according to the instructions provided by the U.S. EPA. Prior to finalizing the report, all of the actions taken in response to the recommendations for corrective actions will be evaluated to determine whether the report accurately reflects the corrections made. The report will be reviewed for technical soundness, completeness, accuracy, comparability, and representativeness by senior technical reviewers and QA Personnel.

It is the responsibility of the Inventory Director to ensure that the report accurately reflects the data and that the master file provides sufficient data to verify the results reported. A copy of the report will be retained in the master file and made available to all project personnel.

4.1.6 Maintenance of the Master File

The master file will be maintained on Missoula County servers. It will contain all data gathered and produced during development of the inventory. It will also contain sufficient supporting data to verify the accuracy of the emissions results reported in the inventory. Proper naming and organization of individual files, documents and spreadsheets will facilitate data retrieval. References will be maintained, along with applicable data contained within each reference. In addition, all email correspondences relating to the inventory development will be saved in a folder within the master file.

4.2 QA Activities and Procedures

QA activities are distinguished from QC activities in that they provide a more objective assessment of data quality because QA personnel are not directly involved in the development of the inventory. QA activities are usually more comprehensive because they include assessments of the effectiveness and appropriateness of the systems established to control data quality.

Several quality assurance checks will be employed by the Montana Department of Environmental Quality and the MCCHD to address the data quality objectives discussed in Chapter 1.2 related to accuracy, completeness, comparability, and/or representativeness: reality/peer review checks, sample calculations and range checks.

4.2.1 Reality Check/Peer Review

Independent review will be conducted by knowledgeable staff at the MDEQ to ensure that data, assumptions, and procedures are reasonable. The objective of these checks is to ensure accuracy, completeness, comparability, and representativeness.

Reasonableness of methods, assumptions, and emissions estimates will be assessed by 1) comparing data sources used in the final inventory to those used for the 2011 NEI; 2) relying on reviewer expertise; and 3) comparing emissions estimates to other inventory efforts, particularly the 2000 Missoula CO year inventory and the 2011 NEI.

4.2.2 Sample Calculations

Sample calculations provide verification of values by replicating calculations. The benefit is to ensure that calculations are done correctly. The objective is accuracy.

Emissions calculations will be duplicated by MDEQ to spot check the accuracy of the arithmetic and, therefore, the resulting emissions estimates. Priority will be given to those categories identified as the largest emissions contributors.

For nonroad and onroad emissions estimates, sample calculations will only be used to verify allocation factors and use of emission factor calculations. The modeling runs themselves will not be checked with sample calculations because the emissions estimates are generated using

EPA-approved models. Rather, these data, which were generated by MDEQ modeling staff, will checked by comparing the results of similar modeling runs conducted for previous inventories (such as the 2000 Missoula CO inventory) to ensure the results are reasonable.

4.2.3 Standard Range Checks

Standard range checks address the data quality objective of comparability. The benefit is to identify the source categories that have the greatest change in emission levels from previous emission estimates. All data quality objectives are addressed using these checks.

The 2010 base year inventory will be compared to the most recent Missoula CO inventory (base year 2000). Any discrepancies (data outliers) will be verified or corrected.

4.2.4 Corrective Action Plan

Corrective and follow-up actions identified during the quality checking process will be noted and referred to the appropriate staff.

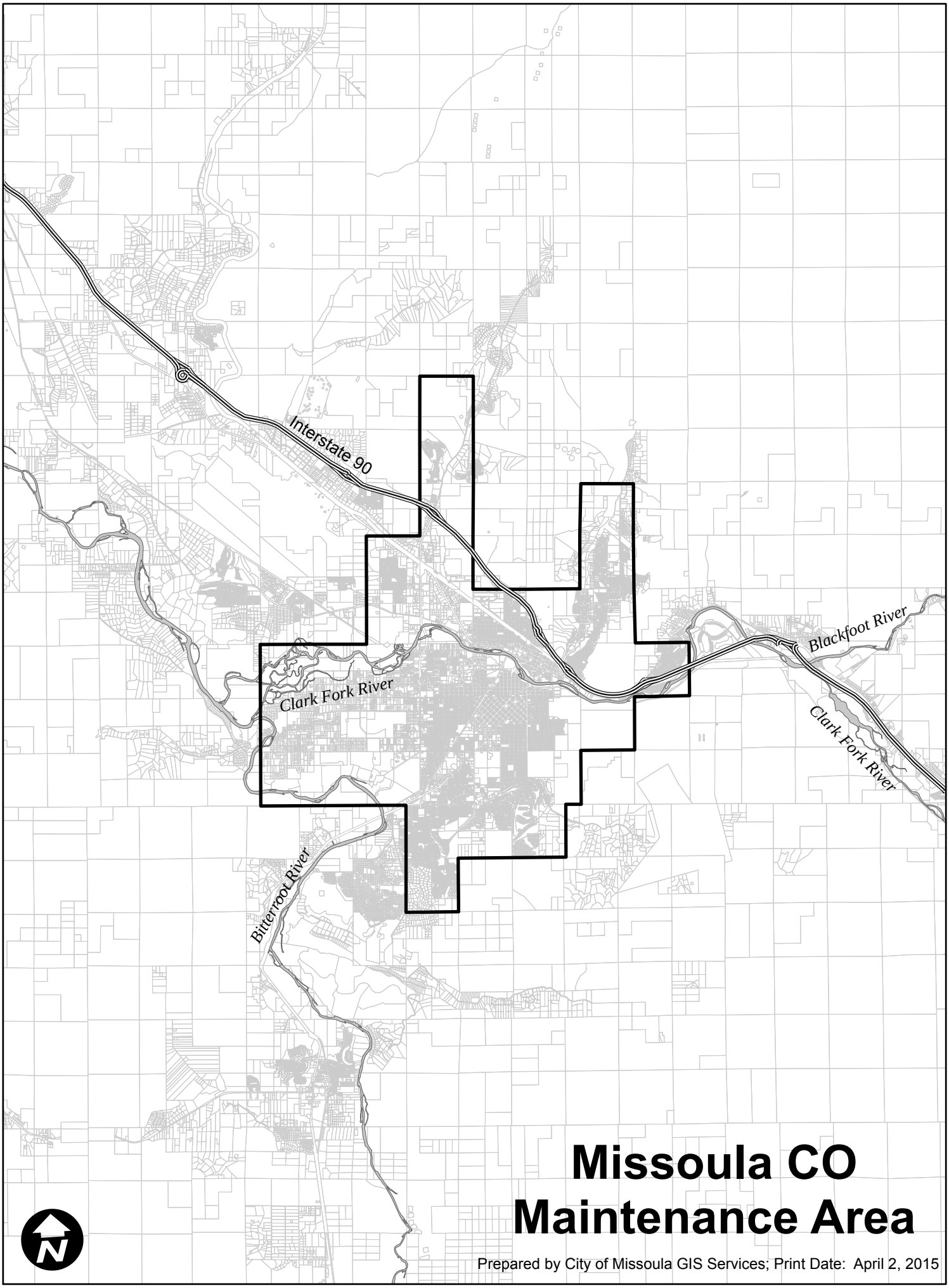
References

[1] C. Cain, "2000 Missoula, Montana, Carbon Monixide Emission Inventory," Montana Department of Environmental Quality, Helena, 2004.

[2] "Emission Inventory Improvement Program (EIIP)," Prepared by the State and Territorial Air Pollution Program Administrators and the Association of Local Air Pollution Control Officials (STAPPA/ALAPCO), 1996.

[3] S. Coefield, "2010 Carbon Monoxide Emission Inventory Plan in Support of Missoula County's Limited Maintenance Plan for the Missoula Carbon Monoxide Maintenance Area," Missoula City-County Health Department, Missoula, 2015.

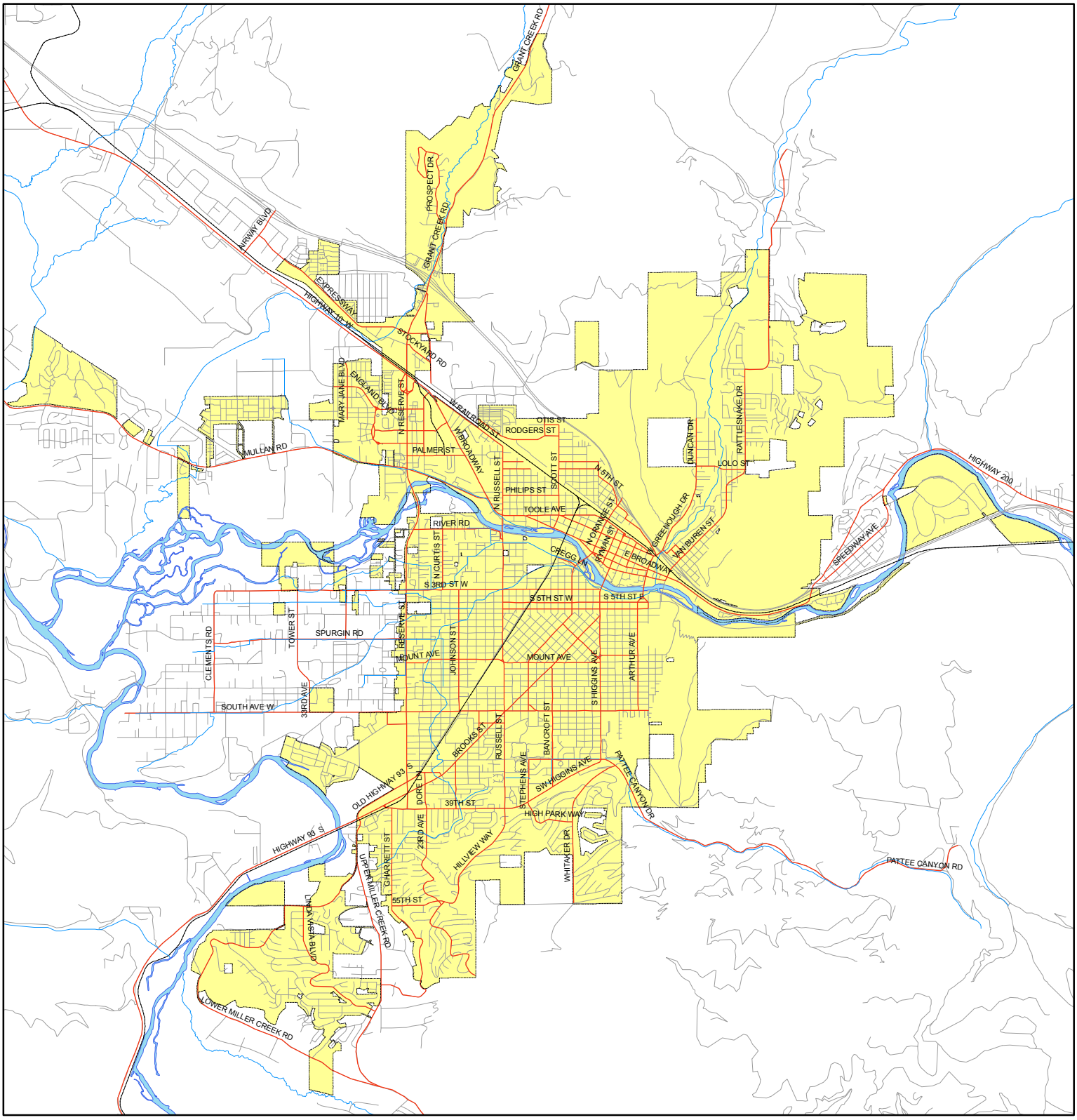
Appendix A: Map of CO Maintenance Area



Missoula CO Maintenance Area

Prepared by City of Missoula GIS Services; Print Date: April 2, 2015

Appendix B: Map of Missoula City Limits



CITY OF MISSOULA, MONTANA - CITY LIMITS MAP

City Limits as of:
February 24, 2014

0 0.5 1 2 Miles

29.2 Square Miles
18,708 Acres
814,932,056 Square Feet

Printing Date: Thursday, February 27, 2014
File: CityMap_8.5x11_PDF.mxd
Prepared By: GIS Services

Appendix C-6: Data and Supporting Documents

APPENDIX D: LOCAL RECORD OF ADOPTION

Missoula County Carbon Monoxide Second 10-Year Limited Maintenance Plan

Local Record of Adoption

Table of Contents

Sarah Coefield - Carbon Monoxide 2nd 10-Year Limited Maintenance Plan

From: Sarah Coefield
To: Interested Parties
Date: 5/6/2016 9:21 AM
Subject: Carbon Monoxide 2nd 10-Year Limited Maintenance Plan

MEMORANDUM

TO: Interested Parties
FROM: Sarah Coefield
DATE: May 6, 2016
RE: Missoula County Carbon Monoxide Second 10-Year Limited Maintenance Plan

The Missoula County Carbon Monoxide Second 10-Year Limited Maintenance Plan (LMP) is available for public review. The document is too large for some email systems, so I have not attached it to this email. The LMP and supporting documents are on the Health Department web site http://www.missoulacounty.us/government/health-department/air-quality/air-pollution-control-areas/carbon-monoxide-2nd-10-year-limited-maintenance-plan. Copies are also available at the Health Department.

The Missoula City-County Air Pollution Control Board will hold a public hearing at 12:15 P.M. on Thursday, May 19, 2016 at the Missoula City-County Health Department, second floor conference room at 301 West Alder to take public comment on the proposed Missoula County Carbon Monoxide (CO) Second 10-Year Limited Maintenance Plan (LMP) and its incorporation into the Montana State Implementation Plan.

The LMP is a fulfillment of the requirements set forth by the U.S. Environmental Protection Agency (EPA) following the area's redesignation as in attainment for carbon monoxide in 2007. The LMP extends the plan set forth in the initial (2007) 10-year maintenance plan to assure continued attainment for another 10 years. After submittal and approval of this second 10-year LMP, there are no further requirements for any additional revisions or modifications to Missoula County's CO LMP.

The Health Department is not recommending any changes to local air regulations as part of the CO LMP.

After the CO LMP is approved locally, it will be forwarded to the Montana Department of Environmental Quality and the Governor of Montana for submission to the EPA and incorporation into the State Implementation Plan.

Written comments can be submitted to the Health Department by 12 P.M. May 19, 2016. The Board will accept both written and oral comments at the hearing. Comments should be sent to: Sarah Coefield, Missoula City-County Health Department, 301 W. Alder, Missoula MT 59802; scoefield@missoulacounty.us; FAX: (406) 258-4781

Sarah Coefield, M.S., M.A.
Air Quality Specialist
Missoula City-County Health Department
301 W. Alder
Missoula, MT 59802
Phone (406) 258-3642

Missoula Public Health
City-County Health Department

Missoula City-County Health Department
AIR QUALITY PROGRAM
301 West Alder Street | Missoula MT 59802-4123
www.missoulacounty.us/HealthDept
Phone | 406.258.4755
Fax | 406.258.4781

To: Legal Advertising, The Missoulian
From: Sarah Coefield
Date: May 2, 2016
Re: Legal ad for May 8th and May 15th, 2016

The Missoula County Health Dept. Purchase Order Number for the ad is **PO # 7856**. Please invoice to Julie Toenyes, MCCHD, 301 W. Alder, Missoula, MT 59802. The cost should be based on the agreement between Missoula County and the Missoulian.

Please place the following legal ad in the Missoulian on **Sundays, May 8th and May 15th, 2016**.

"Public Hearing Regarding Proposed Missoula County Carbon Monoxide Second 10-Year Limited Maintenance Plan"

The Missoula City-County Air Pollution Control Board will hold a public hearing at 12:15 P.M. on Thursday, May 19, 2016 at the Missoula City-County Health Department, second floor conference room at 301 West Alder to take public comment on the proposed Missoula County Carbon Monoxide (CO) Second 10-Year Limited Maintenance Plan (LMP) and its incorporation into the Montana State Implementation Plan. The LMP is a fulfillment of the requirements set forth by the U.S. Environmental Protection Agency (EPA) following the area's redesignation as in attainment for carbon monoxide in 2007. The LMP extends the plan set forth in the initial (2007) 10-year maintenance plan to assure continued attainment for another 10 years. After submittal and approval of this second 10-year LMP, there are no further requirements for any additional revisions or modifications to Missoula County's CO LMP.

Copies of the Limited Maintenance Plan are available at the Missoula City-County Health Department at 301 West Alder, Missoula, MT 59802. Electronic copies are available on the Department's website, http://missoulacounty.us/airquality or by contacting Sarah Coefield at (406) 258-4755 or scoefield@missoulacounty.us . The Air Pollution Control Board will also take written comments until 12:00 P.M. on May 19, 2016. Comments can be mailed to the Health Department at 301 West Alder, Missoula, MT 59802, faxed to (406) 258-4781 or emailed to Sarah Coefield at scoefield@missoulacounty.us. If anyone attending this meeting needs special assistance, they can call or email Sarah Coefield in advance. Missoula County will make reasonable accommodations for any known disability that may interfere with a person's ability to participate.

AFFIDAVIT OF PUBLICATION
THE MISSOULIAN

500 S. Higgins Ave.
Missoula, MT 59801
Phone: (406) 523-5236 Fax: (406) 523-5221

Ad Number: 2045113

Chris Arvish, being first duly sworn, deposes and says. That she is the principal clerk of The Missoulian, a newspaper of general circulation published daily in the City of Missoula, in the County of Missoula, State of Montana, and has charge of the Advertisements thereof.

That the legal regarding:

Public Hearing

a true copy of which is hereto annexed, was published in said newspaper on the following dates: via:

May 8 & 15, 2016

Making all 2 publication(s)

On this day of May 16th, 20 16 before me, the undersigned, a Notary Public for the State of Montana, personally appeared Chris Arvish known to me to be the person whose name is subscribed to the within instrument and acknowledged to me that he/she executed same. IN WITNESS WHERFOF, I have hereunto set my hand and affixed my notarial seal the day and year first above written.

Venue: Missoula, Montana, County of Missoula

ASHLEY McDONALD NOTARIAL SEAL STATE OF MONTANA

ASHLEY McDONALD
NOTARY PUBLIC for the
STATE OF MONTANA
Residing in Missoula, Montana
My Commission Expires
May 26, 2019

Page	:	1 of 1 05/13/2016 14:55:40	**Ad Number**	:	11265120
			Ad Key	:	
Order Number	:	20451113	**Salesperson**	:	CA2 - CHRIS ARVISH
PO Number	:		**Publication**	:	Missoulian
Customer	:	60001021 MISSOULA CITY-COUNTY HE	**Section**	:	EPT (county)
Contact	:		**Sub Section**	:	Classified
Address1	:	301 W ALDER	**Category**	:	Legals
Address2	:		**Dates Run**	:	399 Legals
City St Zip	:	MISSOULA MT 59802	**Days**	:	05/08/2016-05/15/2016
Phone	:	(406) 523-4770	**Size**	:	2
Fax	:		**Words**	:	2 x 2.75, 30 lines
	:		**Ad Rate**	:	269
Printed By	:	misarvic	**Ad Price**	:	County Liners
Entered By	:	misarvic	**Amount Paid**	:	27.00
			Amount Due	:	0.00
Keywords	:	"Public Hearing Regarding Proposed Missoula County			27.00
Notes	:				
Zones	:				

"Public Hearing Regarding Proposed Missoula County Carbon Monoxide Second 10-Year Limited Maintenance Plan"

The Missoula City-County Air Pollution Control Board will hold a public hearing at 12:15 P.M. on Thursday, May 19, 2016 at the Missoula City-County Health Department, second floor conference room at 301 West Alder to take public comment on the proposed Missoula County Carbon Monoxide (CO) Second 10-Year Limited Maintenance Plan (LMP) and its incorporation into the Montana State Implementation Plan. The LMP is a fulfillment of the requirements set forth by the U.S. Environmental Protection Agency (EPA) following the area's redesignation as in attainment for carbon monoxide in 2007. The LMP extends the plan set forth in the initial (2007) 10-year maintenance plan to assure continued attainment for another 10 years. After submittal and approval of this second 10-year LMP, there are no further requirements for any additional revisions or modifications to Missoula County's CO LMP.

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Carbon Monoxide 2nd 10-year Limited Maintenance Plan

Missoula has had a history of violating the federal carbon monoxide (CO) standard. The first recorded violations were in 1977. Once designated as a non-attainment area by the EPA, the department had to write a State Implementation Plan (known as a SIP) detailing how Missoula would attain and then maintain pollution levels below the federal standards.

Thanks to fleet improvements, the introduction of oxyfuels in the winter, and various woodstove programs, Missoula has not exceeded the federal CO standard since 1991.

Missoula was redesignated as in attainment for carbon monoxide in 2007, and we are now a maintenance area for that pollutant. As part of the redesignation process, Missoula is now required to submit a second 10-year maintenance plan to the EPA for incorporation into the SIP.

The Missoula City-County Air Pollution Control Board will hold a public hearing at 12:15 P.M. on Thursday, May 19, 2016 at the Missoula City-County Health Department, second floor conference room at 301 West Alder to take public comment on the proposed Missoula County Carbon Monoxide (CO) Second 10-Year Limited Maintenance Plan (LMP) and its incorporation into the Montana State Implementation Plan.

The Air Pollution Control Board will also take written comments until 12:00 P.M. on May 19, 2016. Comments can be mailed to the Health Department at 301 West Alder, Missoula, MT 59802, faxed to (406) 258-4781 or emailed to Sarah Coefield at scoefield@missoulacounty.us. If anyone attending this meeting needs special assistance, they can call or email Sarah Coefield in advance. Missoula County will make reasonable accommodations for any known disability that may interfere with a person's ability to participate.

You may review the Draft Missoula County Carbon Monoxide Second 10-Year Limited Maintenance Plan by clicking on the links below. A copy is also available at the Missoula City-County Health Department, 301 W. Alder St, Missoula, MT 59802.

DRAFT Missoula County Carbon Monoxide Second 10-Year Limited Maintenance Plan

Appendix A: Limited Maintenance Plan Option

Appendix B: Maps - Maintenance Area, Missoula City Limits, Air Stagnation Zone

Appendix C: Missoula 2010 Carbon Monoxide Emission Inventory

Appendix C-1: Map of Missoula CO Maintenance Area

Appendix C-2: Map of Missoula City Limits

Appendix C-3: MOVES2014 Fuel Formation for the Missoula CO Maintenance Area

Appendix C-4: MOVES2014 CO Maintenance Area Run Specification File

Appendix C-5: Quality Assurance Plan for the 2010 Carbon Monoxide Inventory in support of Missoula County's 2nd 10-Year Limited Maintenance Plan for the Carbon Monoxide Maintenance Area

Appendix C-5(a): Map of CO Maintenance Area

Appendix C-5(b): Map of Missoula City Limits

Appendix C-6: Data and Supporting Documents (available at MCCHD)

Appendix D: Local Record of Adoption (to be completed)

Benjamin Schmidt
Phone: (406) 258-3369
Email: bschmidt@missoulacounty.us

Sarah Coefield
Phone: (406) 258-3642
Email: scoefield@missoulacounty.us

Missoula County – City of Missoula
MPO
METROPOLITAN PLANNING ORGANIZATION

435 Ryman
MISSOULA, MT 59802-4292
www.ci.missoula.mt.us/transportation
PHONE: (406) 552-6670 / FAX: (406) 552-6053

TRANSPORTATION POLICY COORDINATING COMMITTEE (TPCC) AGENDA
City Council Chambers, 140 W. Pine
April 19, 2016
1:30 PM

Voting Members	Agency	Non-voting Members	Agency
Stacy Rye (Chair)	Board of County Commissioners	Lloyd Rue	FHWA-Helena
Jordan Hess (Vice Chair)	City Council	Doug Schallenberger	Ravalli County Commissioner
John Engen	Mayor, City of Missoula	Dr. Garon Smith	Missoula City/County Health Board
Nicole Rowley	Board of County Commissioners		
Don MacArthur	MUTD		
Ed Toavs	MDT-Missoula		
Dick Ainsworth	Planning Board Member		

AGENDA ITEMS

1. Roll Call and Introduction of Audience

2. Approval of Minutes

Recommended motion

Approve the minutes from the previous meeting as presented or as amended.

3. Public Comment

4. Old Business

5. New Business

5.1 Resolution of Support for Missoula County's 2nd 10-Year Carbon Monoxide Limited Maintenance Plan (Sarah Coefield) History

Recommended motion

Approve the Resolution of Support for Missoula County's 2nd 10-year Carbon Monoxide Limited Maintenance Plan

5.2 Letter of Support for Confederated Salish & Kootenai Tribe's Transportation Investments Generating Economic Recovery (TIGER) Grant Application for Highway 93 Multi-use Trail Project - The People's Way (Jessica Morriss) History

Recommended motion

Approve the Letter of Support for the Confederated Salish & Kootenai Tribe's Transportation Investments Generating Economic

Recovery (TIGER) Grant Application for Highway 93 Multi-use Trail Project- The People's Way

5.3 **Presentation and discussion of proposed Long Range Transportation Plan goals, objectives, performance measures, and the concept of establishing a Missoula-area mode share goal/target, including input from the Community Advisory committee (Jessica Morriss)** History

6. Announcements and Closing Comments

7. Adjournment

Note: The City makes reasonable accommodations for any known disability that may interfere with a person's ability to participate in this meeting. Persons needing accommodation must notify the City Clerk's Office to make needed arrangements. Please call 552-6080 or write to Martha Rehbein, 435 Ryman Street, Missoula, Montana 59802, to make your request known.

TRANSPORTATION POLICY COORDINATING COMMITTEE MINUTES
City Council Chambers, 140 W. Pine
April 19, 2016,
At **1:30 PM**

Members present: John Engen, Ed Toavs, Nicole Cola Rowley (Chris Lounsbury) , Don MacArthur (Corey Aldridge), Stacy Rye, Jordan Hess (John DiBari) , Dick Ainsworth
Non-voting members present: Garon Smith, Lloyd Rue
Members absent: None
Non-voting members absent:, Doug Shallenberger
Others present: Jim Carlson, Sarah Coefield, Aaron Wilson, Shane Stack

1. Roll Call and Introduction of Audience

Jessica Morriss, Jim Carlson, Sarah Coefield, Aaron Wilson, Shane Stack

2. Approval of Minutes

Recommended motion Approve the minutes from the previous meeting as presented or as amended.

A motion was made by John DiBari seconded by Mayor Engen, to approve the minutes from the previous meeting as presented or as amended. None opposed, one abstained, the motion passes.

AYES: John Engen, Ed Toavs, Nicole Cola Rowley (Chris Lounsbury) , Don MacArthur (Corey Aldridge), Stacy Rye, Dick Ainsworth

Abstained: John DiBari

3. Public Comment

None

4. Old Business

5. New Business

5.1 Resolution of Support for Missoula County's 2nd 10-Year Carbon Monoxide Limited Maintenance Plan (Sarah Coefield)-- History

Recommended motion Approve the Resolution of Support for Missoula County's 2nd 10-year Carbon Monoxide Limited Maintenance Plan

A motion was made by Corey Aldridge, seconded by John DiBari, to approve the Resolution of Support for Missoula County's 2nd 10-year Carbon Monoxide Limited Maintenance Plan. None opposed, motion passes with all in favor.

AYES: John Engen, Ed Toavs, Nicole Cola Rowley (Chris Lounsbury) , Don MacArthur (Corey Aldridge), Stacy Rye, Jordan Hess (John DiBari) , Dick Ainsworth

Sarah Coefield with the Missoula City/County Health Department gave a presentation on carbon monoxide, including sources of the gas and the negative effects that it causes. The current standard was established in 1977, but they were able to stop monitoring it in 2011 because Missoula was so far below the standard.

Corey asked if they spot check carbon monoxide levels since they are no longer monitoring. Sarah stated that they still monitor vehicle miles traveled because so much of carbon monoxide is from vehicles.

5.2 Letter of Support for Confederated Salish & Kootenai Tribe's Transportation Investments Generating Economic Recovery (TIGER) Grant Application for Highway 93 Multi-use Trail Project - The People's Way (Jessica Morriss)-- History

Recommended motion Approve the Letter of Support for the Confederated Salish & Kootenai Tribe's Transportation Investments Generating Economic Recovery (TIGER) Grant Application for Highway 93 Multi-use Trail Project- The People's Way

A motion was made by Mayor Engen, seconded by John DiBari, to approve the Letter of Support for the Confederated Salish & Kootenai Tribe's Transportation Investments Generating Economic Recovery (TIGER) Grant Application for Highway 93 Multi-use Trail Project- The People's Way. None opposed, the motion passes with all in favor.

AYES: John Engen, Ed Toavs, Nicole Cola Rowley (Chris Lounsbury) , Don MacArthur (Corey Aldridge), Stacy Rye, Jordan Hess (John DiBari) , Dick Ainsworth

Jessica shared that the CSK Tribe would like to build a 33 mile trail along Hwy 93 from the Wye to Dublin Gulch. Approximately 7 miles of the trail would fall within the MPO's planning boundary. If they are awarded the TIGER Grant the LRTP would need to be amended to include this project. They are requesting a letter of support from the TPCC to include in their application packet.

John DiBari asked if there are other TIGER Grant applications out right now. Jessica stated there aren't any other TIGER applications for the current round within the region to her knowledge. . She stated that the project is consistent with the goals and objectives of the current LRTP.

Cory asked if this would fall under the rural section of the TIGER Grant or if there's money set aside for tribes. Jessica stated she believes it is set aside for the tribes.

5.3 Presentation and discussion of proposed Long Range Transportation Plan goals, objectives, performance measures, and the concept of establishing a Missoula-area mode share goal/target, including input from the Community Advisory Committee (Jessica Morriss)-- History

Jessica gave a presentation on adding an 8th goal to the LRTP. The goal would directly address community health and social equity through transportation systems. Aaron presented results from the Citizen Advisory Committee (CAC) and the Transportation Technical Advisory Committee (TTAC) with their support towards adding the goal. He shared the committees' prioritized goals, and explained how those priorities differ from 2012.

Aaron went over the project scoring measures and shared under which goal the different groups thought the scoring measures should go.

Jessica asked the TPCC how they feel about goal 8 and if they think there should be targets established for each measure.

Stacy stated that goal 5, regarding providing safe and secure transportation, should be the top priority.

Ed brought up goal 8, and recommended to frame it in a way that can be applied to all areas. With the current wording, regarding reduced dependence on automobiles, Reserve Street and the interstates will always be at a disadvantage.

Mayor Engen suggested that on goal 8, instead of listing multiple different groups, just state for all people.

Garon shared that the strategic goals from the Board of Health are the same as the first objective on goal 8.

John DiBari responded to Ed's comment regarding projects on the interstate. He noted that there are several other goals that cover projects related to the interstate, but nothing that specifically references goal 8. He asked about the decline in the prioritization of supporting a closer tie between land use and transportation. Aaron stated that staff would look into that.

Jessica asked about setting performance measures. Stacy asked if it was a best practices. Jessica

stated that it can be, and in some instances they are required to, such as with safety.

Corey stated he's in support of goals so that progress can be measured, specifically with mode split.

Mayor Engen brought up setting base lines for goals and asked for caution when doing so.

Stacy brought up places that aren't currently walkable, and how reducing single occupancy trips and mode shift aren't as obtainable in those areas.

Stacy left 2:25. Mayor Engen took over as chair.

Jessica gave a presentation on mode share. She shared statistics from peer communities such as Boulder, CO and explained how communities track their data. She asked if the Committee would like to continue with exploring setting a mode split goal.

Garon stated that he is in support of setting a goal so that they can measure progress made.

Mayor Engen suggested getting information from Boulder, CO on how they set their goals.

Jessica asked about having different goals for city vs county, or resident vs nonresident. Mayor stated a county goal would make sense due to the amount of people commuting in from outside the city. Corey stated since there's not public transit outside the city, it would be good to have a goal for both city and county.

Corey suggested looking at Bloomington, Indiana, since they are similar in size to Missoula.

Mayor Engen stated that investment in modes other than single occupancy vehicles, tend to stretch a dollar further.

John DiBari is generally in support of exploring this.

Ed brought up that it's not one size fits all when it comes to establishing goals.

Jessica shared the Technical Advisory Committee will meet later this month and that they will help with project rankings and looking at cost estimates.

Chris Lounsbury left 2:48.

6. Announcements and Closing Comments

Jessica shared the call for projects for the LRTP went out April 4th and they're due May 6th. Jessica shared the spring bike/ped counts are May 3rd and 7th and they are looking for volunteers.

7. Adjournment

2:52

A RESOLUTION SUPPORTING THE MISSOULA COUNTY CARBON MONOXIDE SECOND 10-YEAR LIMITED MAINTENANCE PLAN

WHEREAS, the United States Environmental Protection Agency (EPA) designated a portion of Missoula County, Montana as a non-attainment area for carbon monoxide (CO) in 1978 because of violations of the 8-hour National Ambient Air Quality Standard (NAAQS); and

WHEREAS, on April 3, 1978, Governor Thomas Judge, for purposes of the State Implementation Plan, designated the Missoula City-County Air Pollution Control Board as the lead agency for air quality maintenance planning in Missoula County; and

WHEREAS, on May 27, 2005, Governor Brian Schweitzer submitted a redesignation request and maintenance plan to the EPA and the EPA approved the request and plan on August 17, 2007 and redesignated Missoula as in attainment for carbon monoxide; and

WHEREAS, upon redesignation Missoula entered a 20-year maintenance period for carbon monoxide; and

WHEREAS, EPA requires a second 10-year maintenance plan be submitted mid-way through the maintenance period, and EPA has agreed that Missoula may submit a limited maintenance plan to fulfill this requirement; and

WHEREAS, the Missoula City-County Air Pollution Control Board will conduct a public hearing concerning the second carbon monoxide maintenance plan; and

WHEREAS, the Clean Air Act requires the Missoula City-County Air Pollution Control Board to consult with the metropolitan planning organization designated to conduct the continuing, cooperative and comprehensive transportation planning process for the area; and

WHEREAS, the Missoula Transportation Policy Coordinating Committee (TPCC) is the designated metropolitan planning organization; and

WHEREAS, the Missoula TPCC held a public meeting on April 19, 2016 to consider the Missoula County Carbon Monoxide Second 10-Year Limited Maintenance Plan,

NOW THEREFORE, BE IT RESOLVED that the Missoula TPCC hereby supports the Missoula County Carbon Monoxide Second 10-Year Limited Maintenance Plan and urges the Missoula City-County Air Pollution Control Board to continue with the submittal process.

BE IT FURTHER RESOLVED that the Missoula Transportation Policy Coordinating Committee recommends to the Governor of the State of Montana that Limited Maintenance Plan be forwarded to the EPA for review, approval and inclusion in the Montana State Implementation Plan.

_____

DATED this 19th day of April, 2016

Chair, Missoula Transportation Policy Coordinating Committee

Missoula City-County Health Department
AIR QUALITY ADVISORY COUNCIL
301 West Alder Street | Missoula MT 59802-4123
www.missoulacounty.us/HealthDept
Phone | 406.258.4755
Fax | 406.258.4781

AIR QUALITY ADVISORY COUNCIL
MEETING AGENDA
Tuesday May 3, 2016 at 6:30 pm
Health Board Conference Room #210 (Second Floor)
Missoula City-County Health Department—301 West Alder

(Estimated time stamps provided for guidance.)

1. Call to order – 6:30 pm

2. Recognize excused absences, establish voting membership

3. Approve agenda

4. Approve March minutes

5. Public comment on non-agenda items

6. Article presentation – 6:45 pm

7. **Action Item:** AQAC membership interview. Potential motion to recommend membership appointment – 7:00 pm

8. **Action Item:** Review the Draft Missoula County Second 10-Year Carbon Monoxide Limited Maintenance Plan (LMP). Potential motion to support the adoption of the LMP. – 7:30 p.m.

9. **Action Item:** Response to proposed Longview coal export terminal environmental impact statement. Potential motion to forward a response letter to the Air Pollution Control Board – 7:50 p.m.

10. Staff Report

11. Public Comment

12. Select AQAC representative for next Air Board meeting update

13. Announcements, other business

14. Adjourn – 8:20 pm

If you need special assistance to attend this meeting, please contact:
Sarah Coefield, Air Quality Specialist
Missoula City-County Health Department
301 W. Alder, Missoula, MT 59802
Phone: 258-4755 FAX: 258-4781
Email: scoefield@missoulacounty.us

AQAC MINUTES
May 3, 2016

Members/alternates present: Dave Atkins, Bill Flanery, Ronni Flannery, Guy Hanson, Jan Hoem, John Ottman, Sue Spanke

Members/alternates absent: Beth Berlin, Bert Chessin, Kathy Tonnessen, Martin Twer, Garon Smith

Staff: Sarah Coefield

Public: Don Anderson, Russ Thomas

1. **Jan Hoem called the meeting to order**
2. **Excused absences recognized –** Beth Berlin, Bert Chessin, Kathy Tonnessen, Martin Twer, and Garon Smith were excused
3. **Agenda approved.**
4. **March minutes were approved with one correction.**
5. **Public comment on non-agenda items**
   None.
6. **Article presentation**
   None

7. **AQAC membership interview**
   The group interviewed Russ Thomas for an alternate position on the Council. The interview questions focused on reasons for serving on the Council, strengths the candidates could add to the Council, climate change, and visions for Missoula's air quality. Following the interview, Guy Hanson made a motion to recommend the Air Pollution Control Board Chair appoint Russ Thomas as an alternate on the Council. Dave Atkins seconded the motion and it passed with a unanimous voice vote.

8. **Draft Missoula County Second 10-Year Carbon Monoxide Limited Maintenance Plan**
   Sarah Coefield gave a presentation on the Draft Missoula County Second 10-Year Carbon Monoxide Limited Maintenance Plan. Missoula was redesignated as in attainment for carbon monoxide (CO) in 2007, and entered a 20-year maintenance period. One of the requirements of redesignation is the submittal of a second 10-year plan to the EPA prior to reaching the halfway point of the maintenance period. The limited maintenance plan (LMP) fulfills this requirement. The updated 10-year LMP is very similar to the initial 10-year maintenance plan that was submitted as part of the redesignation request – the main differences are that this is a limited maintenance plan (which cuts down on modeling and paperwork requirements), and CO ambient air quality monitoring has ceased and been replaced with monitoring winter traffic counts. Sarah told the group that because this LMP will be an update to the State Implementation Plan (SIP), the Clean Air Act requires that the local metropolitan planning organization (the Missoula Transportation Policy Coordinating Committee), and local elected officials (City Council and the Board of County Commissioners) be consulted. Sarah said TPCC has already

provided a resolution of support. Following AQAC's look at the document, it will go before the Air Pollution Control Board for approval and then City Council and the County Commissioners for consultation and resolutions of support.

Bill Flanery asked if the CO maintenance area boundaries should be expanded to reflect the growing population. Sarah said the boundaries were set when Missoula was first declared non-attainment and a boundary change isn't part of the plan. In addition, Ben Schmidt conducted a CO saturation study in the 2000s and found that malfunction junction (in the middle of the maintenance area) still has some of the highest CO concentrations in Missoula – even comparable with the CO along north Reserve Street. Because CO is a "hotspot" pollutant, it is appropriate to have boundaries that encompass the areas with the highest CO concentrations. The current maintenance area boundaries extend quite far beyond Malfunction Junction and north Reserve Street, and are therefore still appropriate. In addition, the CO levels at the hotspots in Missoula are well below the National Ambient Air Quality Standard, so there are no indications that the boundary should be expanded.

Guy Hanson made the following motion:

> On May 3, 2016, the Missoula City-County Air Quality Advisory Council had the opportunity to review a draft of the Missoula County Carbon Monoxide Second 10-Year Limited Maintenance Plan. The Council supports the planned process and continuing progress of Missoula's Limited Maintenance Plan submittal, with the knowledge that the document before us is a draft, and may undergo changes before its final approval and submittal to the EPA.

Ronni Flannery seconded the motion and it passed with a unanimous voice vote.

This was followed by a brief discussion about wood stoves. Dave Atkins said we should look at updating the 1996 Missoula wood stove survey. Jan Hoem said she has a friend whose son is in real estate and he didn't know about the wood stove removal requirements in Missoula. The group discussed the need for a better understanding of the stoves in Missoula and the need to re-educate realtors about removal requirements. Sarah said she could bring the 1996 survey to a future meeting for folks to look at the survey methods.

9. **Response to proposed Longview coal export terminal environmental impact statement**
Jan Hoem said that on the 30th of April, the draft environmental impact statement (DEIS) for the Longview terminal was released and available for public comment. She said this study is for the only remaining planned terminal out of the six that were initially proposed. In 2012, the Council forwarded a letter to the Air Pollution Control Board for the Board to submit as public comment on those six terminals. The Board submitted the letter, requesting the No Action alternative for the six terminals. Jan said that if all the terminals were built, Missoula would have seen up to 60 additional trains per day.

Jan said the scoping hearing for the Longview terminal went forward, and they divided

into two groups: Cowlitz County with the Washington Department of Ecology and a federal group. She said it's still uncertain what the feds will come up with.

Jan said Washington State tried to do a more comprehensive study that, while still inadequate, acknowledges Montana impacts. She said she and Harold Hoem read the DEIS and wrote a draft letter over the weekend. Sarah Coefield edited the letter on Monday. Jan said they took a few things from the 2012 letter and chose three topics to discuss. She said one of the major things missing from the DEIS is a health impact assessment.

The group discussed the letter and made some edits.

Bill Flanery made a motion to forward the letter to the Air Pollution Control Board to send to Cowlitz County and the Washington Department of Ecology.

Dave Atkins said he was concerned the safety section doesn't focus enough on air quality.

Jan said they tried to tie air quality in to the discussion with the sentence about impacts from derailments. The importance of the air quality impacts could be emphasized by moving the air quality section ahead of the safety section.

Guy Hanson said he would second Bill Flanery's motion with the discussed amendments.

The motion passed with a unanimous voice vote.

10. Staff report

Sarah Coefield gave the staff report. The Missoula County Second 10-Year Carbon Monoxide Limited Maintenance Plan is proceeding through the local adoption process.

Jim Carlson, the Environmental Health Director retired at the end of April after 41 years with Missoula County. Sarah said there has not yet been any move to announce the position or release a job description.

Sarah said she and Ben have been responding to complaints about illegal stoves and outdoor burns.

To date there have been more than 7,000 permitted burns in the county, and about 3,800 permits have been sold.

Sarah said she has been working with the Ninemile Ranger District to dial in on a good acreage for understory burns in the Frenchtown area.

She said she's been fielding questions about the upcoming wildfire season from the press. Based on the snowpack, so far it's looking like it will be an average wildfire year in

this region.

Sarah said Ben is working on industry stuff.

11. Public comment

Don Anderson said he is a pulmonary toxicologist researcher at the university. He said the meeting was very interesting and he looks forward to coming again.

12. Select AQAC representative for next Air Board meeting update

Jan Hoem will give the update at the next Air Board meeting.

13. Announcements, other business

None.

14. Adjourn

Missoula Public Health
City-County Health Department

AGENDA

MISSOULA CITY-COUNTY
HEALTH, AIR POLLUTION CONTROL,
& WATER QUALITY DISTRICT BOARDS

May 19, 2016 – 12:15 p.m. to 3:00 p.m.
Missoula City-County Health Department
Room 210 - Board Conference Room
301 West Alder, Missoula, MT 59802

AIR POLLUTION CONTROL BOARD (APCB)

1. **Hearing and possible action on adoption of the Missoula County Carbon Monoxide Second 10-Year Limited Maintenance Plan** [12:15 p.m. or shortly thereafter] ..... Sarah Coefield

Adjourn temporarily

BOARD OF HEALTH (BOH)

Note: The draft April 21, 2016 minutes will be provided for review and approval at the June meeting.

1. **Continuation of hearing and possible action on Schweitzer request for variance from Health Code, Regulation 1 Wastewater Treatment and Disposal Systems** [Scheduled for 12:45 p.m. or shortly thereafter] ..... Dan Fultz
2. **Continuation of hearing and possible action on proposed revisions to Health Code, Regulation 2 Large Group Function Public Health Permits and to fees** [Scheduled for 1:15 p.m. or shortly thereafter] ..... Todd Seib
3. May journal report; identify volunteer for June report ..... Debbie Johnston; Ross Miller
4. **Approve preliminary Fiscal Year (FY) 2017 County budget for the Health, Animal Control And Junk Vehicle Funds** ..... Ellen Leahy

   Strategic Plan update - Section II Environmental Health Conditions:

   a. Indoor Air Quality ..... Todd Seib
   b. Human Injury/Infection from Dog Bites ..... Jeff Darrah
5. Maternal Child Health Advisory Council update ..... Teresa Henry
6. **Nomination and Appointment of Board Medical Doctor** ..... Ross Miller
7. Director's report and accreditation update ..... Ellen Leahy
8. Public comments on items not on the agenda ..... Ross Miller
9. Board and staff comments on items not on the agenda ..... Ross Miller

AIR POLLUTION CONTROL BOARD (APCB) - Reconvened

2. **Approve April 21, 2016 minutes** ..... Ross Miller
3. **Action on proposed Air Pollution Control Board letter to submit public comment to the Washington State Department of Ecology and Cowlitz County (WA) regarding the Washington State Environmental Policy Act Draft Environmental Impact Statement (SEPA DEIS) on the Millennium Bulk Terminals – Longview (MBTL) facility** ..... Jan Hoem
4. Air Quality Advisory Council update ..... Jan Hoem
5. Public comments on items not on the agenda ..... Ross Miller
6. Board and staff comments on items not on the agenda ..... Ross Miller

WATER QUALITY DISTRICT BOARD (WQDB)

1. **Approve April 21, 2016 minutes** ..... Ross Miller
2. **Approve preliminary Fiscal Year (FY) 2017 County budget for the Water Quality District and Milltown Redevelopment Historic Preservation Trust Funds** ..... Ellen Leahy
3. Water Quality Advisory Council update ..... Travis Ross
4. Public comments on items not on the agenda ..... Ross Miller
5. Board and staff comments on items not on the agenda ..... Ross Miller

ADDITIONAL INFORMATION

Agenda items and their order are subject to change. For the current agenda, call the Health Department at 258-4770 or go to the website for the three Boards as noted below. To receive the agenda monthly by e-mail, send an e-mail request to JMohr@missoulacounty.us and provide your e-mail address. Unless the meeting schedule is adjusted, the agenda is posted on the 2nd Thursday of the month via the Internet at http://www.missoulacounty.us/government/health-department/health-boards-councils/boards-agendas-minutes.

If you need special assistance to attend this meeting, please provide notice 48 hours in advance by calling the Health Department at 258-4770 or e-mail your request to JMohr@missoulacounty.us.

Published 05/12/16

Missoula City-County Air Pollution Control Board
May 19, 2016

Board Members Present: Jean Curtiss, Teresa Henry, Debbie Johnston (Vice Chair), Ross Miller (Chair), Dr. Tom Roberts and Dr. Garon Smith

Members Excused: Julie Armstrong

Staff Present: Administration: Ellen Leahy, Julie Mohr and Kathy Potwin; Environmental Health: Sarah Coefield

Legal Counsel Present: Erica Grinde (Civil Attorney, County Attorney's Office)

Others Present: Jan Hoem (Chair, Air Quality Advisory Council) and Ron Scholl (Cameraman, Missoula Community Access TV)

Meeting Called to Order: Ross Miller (Chair) called the meeting to order at 2:50 p.m.

ITEM 1 HEARING AND POSSIBLE ACTION ON ADOPTION OF THE MISSOULA COUNTY CARBON MONOXIDE SECOND 10-YEAR LIMITED MAINTENANCE PLAN

- **Attachment A**, "April 12, 2016 Memo from Sara Coefield to Board Regarding the Draft Missoula County Carbon Monoxide 2nd 10-Year Limited Maintenance Plan with May 6, 2016 Addendum by Julie Mohr"
- **Attachment B**, "Missoula County Carbon Monoxide Second 10-Year Limited Maintenance Plan"
- **Attachment C**, "LMP – Appendix A: Limited Maintenance Plan Option for Nonclassifiable CO Nonattainment Areas"
- **Attachment D**, "LMP – Appendix B: Missoula CO Maintenance Area" (Map)
- **Attachment E**, "LMP – Appendix C: 2010 Carbon Monoxide Emission Inventory"
- **Attachment F**, "Missoula County Carbon Monoxide 2nd 10-Year Limited Maintenance Plan" (PowerPoint Presentation)

Background: Sarah Coefield (Air Quality Specialist, Environmental Health Division) noted that carbon monoxide (CO) is a colorless, odorless gas, which works as a chemical asphyxiant. She explained how breathing it in can cause a person to suffocate to death and that exposure to short-term concentrations or lower concentrations can cause dizziness, nausea and impaired mental function. It is a product of incomplete combustion with an organic substance being combusted. Typical sources in this area include wood stoves, smoke from wood combustion and particularly vehicle exhaust, which is the primary source of CO in this region. The 8-hour National Ambient Air Quality Standard (NAAQS) is 9 parts per million (ppm) and is not to be exceeded more than once per calendar year.

Ms. Coefield reviewed Missoula County's history of being designated nonattainment for carbon monoxide when the standard was implemented in the 1970s. The sources then were also vehicle emissions and residential wood combustion. Our first efforts at cleaning up revolved around our woodstove rules and efforts to reconfigure intersections to decrease vehicle idling time. As soon

as we implemented the use of oxygenated fuels in the 1990s, we ceased exceeding the standard. We last exceeded the standard in 1991. In the interim, the vehicle fleet has turned over enough that the newer standards for vehicle efficiency and emissions have effectively rendered CO as a non-issue, basically throughout the country. While use of oxy fuels got us there, the turnover of the vehicle fleet has held us in good stead. Most places no longer have oxy fuels programs because the fleet turnover has been so effective.

Staff Recommendation: In 2005, we submitted a redesignation request to the Environmental Protection Agency (EPA) to become designated as being in attainment for CO. The request was approved in 2007, which kicked off the required 20-year maintenance period. This requirement includes updating the maintenance plan to show how continued attainment of the standard will be accomplished. This is the plan (**Attachments B - E**) for which Board action is requested.

The maintenance area for CO includes the most urban areas: the city and going out a bit to Target Range and a bit up Grant Creek and Rattlesnake down to Miller Creek. It basically encompasses the populated areas. The highest CO concentrations occur where people are in a congested area and where there is the highest vehicle traffic. Ben Schmidt (Air Quality Specialist) did the work to identify saturation sites for CO. The highest concentration continues to occur at Malfunction Junction. This intersection of Brooks, Russell and South was reconfigured in the early 2000s, which helped improve traffic flow and reduced idling time tremendously. This was the location of our CO monitor.

The National Ambient Air Quality Standard (NAAQS) is 9ppm for an eight-hour average. We have not had CO levels close to the maximum for a very long time. Our levels are less than one-third of that level now. In 2011, the State talked to us and we agreed to cease monitoring for CO since money was being spent on a nonissue. Great Falls and Billings also at one time were nonattainment for CO and ceased monitoring about the same time because of their low levels.

As part of the Second 10-Year Limited Maintenance plan (LMP), we had to prepare an emission inventory and update the one that was done for the redesignation request. The emission inventory needs to be representative of your most recent years of data collection: we used data from 2010 since our most recent data collection ended in 2011 and 2010 had a lot of good, available data. Ms. Coefield explained that on-road vehicle sources account for the vast majority of CO, followed by residential wood burning and non-road mobile sources, such as snowmobiles, leaf blowers and other small engines that are not on the roads. The LMP requires additional elements:

- An EPA-approved air quality monitoring network or a verification of continued attainment;
- A maintenance demonstration, which shows that levels are below the NAAQS;
- An emission inventory;
- Contingency provisions—an explanation of what will be done to bring levels back down if they increase to a bad extent and the standard is exceeded; and
- A Conformity Determination Discussion, which relates to transportation projects. When there are transportation projects being planned, there is a requirement that part of that planning process be an analysis to show that it is not going to cause a problem with CO.

This has all gone to EPA for initial review already. They have looked at the document and have given the thumbs up on each element. They essentially wrote the conformity determination so Ms. Coefield knows they should like it.

This is very similar to the plan that was submitted in 2005. The main difference is that this is a Limited Maintenance Plan (LMP). The previous plan was a full-out maintenance plan. That was because in 1991 we were designated as moderate nonattainment based on our CO levels and that required a full maintenance plan. Our CO levels have fallen so far that we are now qualified to provide an LMP. This means that less modeling is required: the emission inventory does not have to be modeled out for multiple years into the future. The motor vehicle emissions budget does not have to go out so many years into the future. It reduces the paperwork burden on the plan.

The other main difference is the acknowledgement that we ceased monitoring CO back in 2011, with an explanation of how we will continue to verify attainment based on traffic data. There is a traffic counter out at Station A037 at the Orange Street Bridge. It is the most appropriate traffic counter for catching large amounts of Missoula traffic. We will be tracking that traffic to see if it ticks up more than 25% over the 2008/2010 levels of traffic. If it does, then we will spot check CO levels to see if we need to continue the monitoring program to ensure there is still not a CO problem. This is also the strategy being used in Great Falls and Billings. EPA has signed off on it and has already seen and signed off on this version for us.

This is an update to our State Implementation Plan (SIP). The Missoula City-County Air Pollution Control Board is the lead agency for SIP updates for Missoula County. Because this is a SIP update, we are required to consult with the City Council, the County Commissioners and the Transportation Policy Coordinating Committee (TPCC). We have been to TPCC already. They gave us a resolution of support in April. Ms. Coefield brought the plan to the Air Quality Advisory Council on May 3rd and they gave a motion of support with the understanding that it is still a living document: there is the chance for public comment and so the plan could still change. Following this hearing, Ms. Coefield will schedule an agenda item for the City Council, the Public Safety and Health Committee, and the County Commissioners in order to further take the SIP through the processes. Then it will go to the Department of Environmental Quality (DEQ) and they will put it out for a 30-day public comment period, at which point it will be forwarded to Governor Bullock for submission to the EPA. They have a lengthy amount of time to review it. They told Ms. Coefield that they are not precisely sure when they will get to it; they said they are not touching the PM_{10} document until 2017 because they are very busy.

Ms. Coefield asked the Board to pass a motion supporting the LMP and provided the language to simplify the motion.

Board Discussion: Jean Curtiss asked and Ms. Coefield confirmed that when the LMP goes to the City Council and to the Commissioners, it is for concurrence—to pass resolutions of support. This is for approval. It is not a rule rewrite. They cannot amend the plan. Dr. Smith commented that it will be the same when DEQ receives the document.

Dr. Tom Roberts asked for a reminder about the relationship between the Carbon Monoxide Second 10-Year LMP and the attainment plan for PM_{10}. Mr. Miller asked for an update on the status of the PM_{10} Maintenance Plan (MP). Ms. Coefield, Director Leahy and Dr. Smith responded as follows:

- The request to be redesignated as being in attainment for CO was approved in 2007. Having reached the halfway point in the required 20-year maintenance period, the draft LMP for the second half of the period has been prepared.
- The department has submitted a PM_{10} redesignation request and started on the PM_{10} MP in 2014. In 10 years, when the halfway point is reached for the maintenance period, then a similar update will be submitted for it.
- As of a few weeks ago, Governor Bullock has not yet signed the plan for PM_{10}. The department encouraged DEQ to push it through. However, EPA said they are not going to look at it until October, 2017. Nevertheless, Ms. Coefield will continue to check in order to confirm that it is submitted to the EPA.
- The CO and PM_{10} plans do not connect to one another.
- Fortunately, Missoula County has not been in nonattainment for any other pollutants so there are no other maintenance plans.
- We are obligated for just the six criteria pollutants.

In response to a question from Debbie Johnston, Ms. Coefield said that wildfire is treated as an exceptional event and related increases in CO levels are not counted toward violations of the standard. Interestingly, even with increases in CO levels due to wildfire smoke, we are not coming close to surpassing the standard. We are too far away from the fires. Wildfires also have not caused us to exceed the PM_{10} daily standard. However, for $PM_{2.5}$, we do like taking out the wildfire smoke.

Public Comments: No comments were given.

Ms. Johnston made the motion for action.

Motion: The Air Pollution Control Board approved the motion to approve the Missoula County Carbon Monoxide Second 10-Year Limited Maintenance Plan (LMP) and to forward the LMP to the Montana Department of Environmental Quality (DEQ) for the Governor's approval and submission to the U.S. Environmental Protection Agency for incorporation into the State Implementation Plan. The motion carried as follows: Ayes – 6 (Curtiss, Henry, Johnston, Miller, Dr. Roberts and Dr. Smith); Nays – 0; and Excused – 1 (Armstrong).

Mr. Miller temporarily adjourned the meeting to convene the meeting of the Board of Health with specified start times for continued hearings. He reconvened the meeting of the Air Pollution Control Board at the conclusion of that meeting

ITEM 2 APPROVE APRIL 21, 2016 MINUTES

Dr. Garon Smith made the motion to approve the minutes.

Motion: The Air Pollution Control Board approved the motion to accept the April 21, 2016 minutes as submitted. The motion carried as follows: Ayes – 6 (Curtiss, Henry, Johnston, Miller, Dr. Roberts and Dr. Smith); Nays – 0; and Excused – 1 (Armstrong).

ITEM 3 ACTION ON PROPOSED AIR POLLUTION CONTROL BOARD LETTER TO SUBMIT PUBLIC COMMENT TO THE WASHINGTON STATE DEPARTMENT OF ECOLOGY AND COWLITZ COUNTY (WA) REGARDING THE WASHINGTON STATE ENVIRONMENTAL POLICY DRAFT ENVIRONMENTAL IMPACT STATEMENT (SEPA DEIS) ON THE MILLENNIUM BULK TERMINALS – LONGVIEW (MBTL) FACILITY

- **Attachment G**, "May 6, 2016 Memo from Sara Coefield to Board: Longview Coal Terminal Draft Environmental Impact Statement"
- **Attachment H**, "May 19, 2016 Air Pollution Control Board Comment Letter: Longview Coal Terminal Draft Environmental Impact Statement"
- **Attachment I**, "SEPA DEIS Handout – People's Hearing, Spokane, WA)

Presentation: Jan Hoem (Chair, Air Quality Advisory Council) noted the active role the Board has taken in the past to submit public comment letters on coal export terminals. The Draft Environmental Impact Statement (DEIS) on the Longview Terminal came out on April 29th. The proposed letter for public comment was presented to the Advisory Council for review and discussion at their May 2nd meeting. Board action on the letter needs to be taken today because the public comment period ends on June 13th.

Mrs. Hoem believes this is the last of this type of public comment letter that will be written. The Board first sent a letter of public comment on proposed coal export terminals in 2012, when six West Coast terminals were proposed. She identified four proposals that were canceled early on. The Cherry Point Terminal, proposed north of Bellingham, Washington is on hold—and may permanently be on hold—due to the Lummi Nation's appeal that it will destroy their traditional fishing grounds—and for other reasons.

The DEIS for Longview did apply the things the Board wrote about in the 2012 letter, but the DEIS only touched on Montana very lightly. It grossly underrepresents cities and communities along the rail line outside the State of Washington. A major element that is missing is a Health Impact Assessment (HIA). Mrs. Hoem noted that a people's hearing was held last week on this terminal, which was attended by Dr. Paul Smith—a pediatric pulmonologist at Community Medical Center (CMC). He spoke on what a HIA might look like for Missoula. (See **Attachment I**.)

In looking at the DEIS, there were so many things that were missing. The Advisory Council chose to focus on the threes areas that seem most pertinent. The letter will go to the two different departments identified in the letter. It will not be necessary to respond to the federal opportunity that will come later. Mrs. Hoem will attend an official hearing on the Longview Terminal, which will be held next week in Spokane.

Board Discussion: Debbie Johnston asked Mrs. Hoem if she can provide a citation to include for the second and third sentences in Section 3.0. According to Mrs. Hoem, this is a direct quote from the summary (page 39) of the DEIS. In response to a question from Dr. Tom Roberts, she said the DEIS was intended to include a HIA. However, when the document was published on April 29th, the committee that was to prepare the assessment had not yet been formed. She does not believe the HIA will be available in time for public comment.

Dr. Roberts noted that there are references to oil transport (**Attachment H**, Section 2.0) and asked whether the proposal for this terminal includes oil. Mrs. Hoem said it does not. The references to crude oil have to do with rail line use and the fact that so many very heavy trains are being sent across the tracks, which requires more maintenance. Mr. Miller said that extra use of the rail lines creates a higher risk of derailments, in general. He noted that Tesoro is proposing increased transport of oil by rail. Mrs. Hoem added that when the letter asks the agencies to look at the cumulative impacts, this is a bigger picture than just the coal trains.

Regarding the comments for Section 2.0, Ms. Curtiss said that impacts might not always be on the infrastructure. Mrs. Hoem said the thinking for this comment is that the DEIS mentions the need for quiet zones where there are frequent crossings close to populated areas. She said if we want them, as it stands now, 95% of the responsibility will fall on the local government, which is a big cost. You have to add two arms, lights and a full stop on either side of the crossing for safety. Currently, without this, the trains have to whistle three times when they come to these crossings, which is a disturbance to anyone living close by. Ms. Curtiss said any local government that puts in a quiet zone then takes on the responsibility of having an unarmed track. She understands the point being made but would not express it this way. She would take it out.

Ms. Curtiss and other Board members thanked Ms. Hoem and the Advisory Council for taking on the issue of the coal export terminals. Board members requested the following revisions:

- Section 1.0 Air Quality – Comments: Strike the second sentence, "Why doesn't the public have access to this now?" (Requested by Dr. Roberts)
- Section 2.0 Rail Safety and Capacity – Comments:
    - Strike "Local governments lack the capital for major infrastructure improvements." (Requested by Ms. Curtiss)
    - Strike "Is the Tesoro Savage proposal involving oil trains considered in the DEIS?" (Discussed by Dr. Roberts, Mr. Miller and Ms. Curtiss)
    - Revise the final sentence to read, "The DEIS must consider the cumulative impacts <u>on the rails</u> of ~~other~~<u>-all</u> coal and oil-by-rail proposals<u>, including the Tesoro Savage proposal</u>. (Discussed by Dr. Roberts, Mr. Miller and Ms. Curtiss)
- Section 3.0 Climate Change – First Paragraph:
    - In the first sentence, revise "CO2" to read "CO_2". (Requested by Dr. Smith)
    - Revise the second sentence to read, "<u>According to the DEIS, ~~G~~g</u>reenhouse gas emissions from the Proposed Action~~,~~ would exceed various national and state thresholds… (Revised to show that sentences two and three were quoted from the DEIS. In order to accomplish this, Sara Coefield made additional minor revisions to capitalization and punctuation in the sentences.)

Dr. Smith made the motion for action.

Board and Staff Comments: No additional comments were given.

Public Comments: No comments were given.

Motion: The Air Pollution Control Board approved the motion to submit public comment to the Washington State Department of Ecology and Cowlitz County (WA) regarding the Washington State Environmental Policy Draft Environmental Impact Statement (SEPA DEIS) on the Millennium Bulk Terminals – Longview (MBTL) Facility, with the revisions noted on pages 6 and 7 of these minutes, and to authorize the Chair to sign the letter. The motion carried as follows: Ayes – 6 (Curtiss, Henry, Johnston, Miller, Dr. Roberts and Dr. Smith); Nays – 0; and Excused – 1 (Armstrong).

ITEM 4 AIR QUALITY ADVISORY COUNCIL UPDATE

Ms. Hoem reported that Sara Coefield presented the Draft Missoula County Carbon Monoxide 2nd 10-Year Limited Maintenance Plan, which was approved by the group. They also discussed outdoor burning and the record that is maintained as to who has woodstoves. They likely will pursue the use of woodstoves and their impact on our air quality.

ITEM 5 PUBLIC COMMENTS ON ITEMS NOT ON THE AGENDA

No comments were given.

ITEM 6 BOARD AND STAFF COMMENTS ON ITEMS NOT ON THE AGENDA

Dr. Smith reported that there is no update for the Transportation Policy Coordinating Committee because their meeting is scheduled next week.

Adjournment: Mr. Miller adjourned the meeting at 3:09 p.m.

Respectfully submitted,

Ellen Leahy
Health Officer

PUBLIC SAFETY AND HEALTH COMMITTEE AGENDA
CITY COUNCIL CHAMBERS
140 West Pine Street
Missoula, Montana
June 8, 2016, 10:30 AM - 11:30 AM

Members: Julie Armstrong (vice chair), Emily Bentley, Michelle Cares, John DiBari, Annelise Hedahl, Jordan Hess, Gwen Jones, Bryan von Lossberg, Harlan Wells, Heidi West, Jon Wilkins (chair)

I. Administrative Business

A Roll Call-- History

1. Approve minutes from 5/25/16 meeting.-- History

II. Public Comment on Items not Listed

III. Regular Agenda

Note: The committee will discuss the following item(s) and take public comment on each of them during the meeting.

A Amend City Smoking Ordinance--Health Department History

Recommended motion:

Review and set a public hearing date (possibly a joint City Council, County Commissioners, Health Board Hearing) to amend City Ordinance 8.37.101 through 8.37.140

B Missoula County Carbon Monoxide Second 10-year Limited Maintenance Plan--Sarah Coefield History

Recommended motion:

Adopt a resolution supporting the Missoula County Carbon Monoxide Second 10-Year Limited Maintenance Plan

C FY16 Edward Byrne Memorial Justice Assistance Grant--Chief Mike Brady History

Recommended motion:

IV. Adjournment

Note: The City makes reasonable accommodations for any known disability that may interfere with a person's ability to participate in this meeting. Persons needing accommodation must notify the City Clerk's Office to make needed arrangements. Please call 552-6080 or write to Martha Rehbein, 435 Ryman Street, Missoula, Montana 59802, to make your request known.

PUBLIC SAFETY AND HEALTH COMMITTEE MINUTES
City Council Chambers
140 West Pine Street
Missoula, Montana
June 8, 2016, 10:30 AM

I. Administrative Business

A Roll Call -- History

Members present: Julie Armstrong, Michelle Cares, John DiBari, Jordan Hess, Bryan von Lossberg, Heidi West, Jon Wilkins, Emily Bentley, Annelise Hedahl

Members absent: Harlan Wells, Gwen Jones

Others present: Cathy Janney, Jim Nugent

1. Approve minutes from 5/25/16 meeting. History

Approved.

II. Public Comment on Items not Listed

III. Regular Agenda

A Amend City Smoking Ordinance --Health Department History

(The Committee Chair took this item up last). Ellen Leahy, Director of Missoula City County Health Department and Kayla Warren, with Tobacco Prevention Program from the County spoke on the City Smoking Ordinance Amendment. The referral as it states is to amend the existing Missoula Municipal Code as it relates to smoking in public places. She does not know how long ago Jim Carlson was asked to go into the regulation and bring it up to speed. A lot has happened at the State level since that time. What Ellen is presenting, Jim Carlson prepared along with City Attorney's Office. What the Health Department is proposing is to revise MMC 8.37.010 and 8.37.140. They are proposing to delete sections that are less stringent than the State Law.

The Missoula ordinance was the first local smoking ordinance in the state of Montana in the 1990s. As the Sate Clean Indoor Act started coming up to speed, some of Missoula's provisions became old or inconsistent. Some of them are still ahead of the game. What they are trying to do is to be consistent with State law, not be less strict than State law and keep in place by codifying some of the practices that we had in Missoula for almost 16-17 years.

They propose to delete sections in Missoula's code which are less stringent than the Montana State Indoor Act. They use much of the same language so there is no definition confusion. One of the important things that Missoula has and proposes to keep by codifying it rather than keeping a policy is to clearly define what a smoking shelter is which is extremely important because State law does not clearly define that. Missoula has had a history of some unsafe structures over the years. They have had problems where

someone will build something and it ends up being more enclosed than it should be, and they feel they need more information in the guidance before individuals put the expense into building. The proposal deletes language that would allow smoking in ventilated rooms in bars and truck stops. To make any ground with the first smoking ordinance in the state, Missoula did allow for those exemptions on existing properties. That is no longer the case because of the State law, so Missoula is less stringent than state law and we need to clean that up.

When they passed the proposed revisions to city and county staff, they got a comment from Donna Gockler that she has been practicing with Missoula policy that by policy some prohibitions on smoking in parks such as under the pavilions, certain events…and again that is not a new practice. They would want to do more work with the community if they are proposing a new practice, but it is something that Donna sees beneficial to codifying in the City Ordinance. That is a new provision for the ordinance. It allows the city or the county to establish other properties that they own as non-smoking. The city can go with the whole park, or some other entity that the city owns or end up owning. They are proposing that the extraterritorial powers that are in the State law so that a city ordinance that has a healthy effect is for health reasons can be enforced and in effect in a five mile radius around the city boundaries. In order to do that, they have to have the city ordinance but action by the county commissioners and the health board. It provides for limited law enforcement through police and sheriff. At the health department, they do all the enforcement by State law, and they have from the beginning when it comes to restaurants, workplaces and everything that is covered by the Montana Clean Indoor Air Act, but the act does not deal with parks, sidewalk cafes and the types of events that the city or county may have. In those areas, it would have to be designated who would do the enforcement. Donna told Ellen that they regularly through park policy tell people where they can and cannot smoke when they use the parks, and it is not a huge enforcement problems. The issues with restaurants are not big enforcement problems, but it would put some teeth in the ordinance if someone refused to respect the requirements.
The Missoula ordinance would provide for fines that start at the first offense and escalate through the first offense. State law gives you three chances on an offense before you event get fined. They one they are proposing the amounts are $100.00, $200.00, and $500.00 respectively. She wants to point out that they initiated and continue to manage the smoking ordinance largely through education. The cultural change is significant and is different than it was fifteen years ago, but they manage it through education first before they go through notices of violation unless they are looking at a licensed establishment, because they already inspect licensed establishment. Kayla Warren is the one that does the education and she is here because she is more familiar what it looks like on the ground and what the Clean Indoor Act says.

When the health department looked at revising the ordinance, they considered recommending that they take the ordinance off the books but for the reasons she has explained, we have additional practices in Missoula that it would be better to keep in place by codifying them.

Emily asked about bars downtown like the Top Hat and the Rhino if people are allowed to smoke in the outdoor patios anymore. Ellen said if they are patios they can smoke on them, but if they are shelters they have to have a door on the outside so you cannot build a room onto the casino and have your employees going in and out of the room and say that's your smoking shelter because that does not protect the employee from the Class A carcinogen. It also has to meet different zoning and setback requirements 20% of the vertical space has to be permanently open to outside air. You cannot have a window that closes and count it that way. The building department has additional requirements because they don't want heaters and types of things that would be unsafe in those types of shelters. There is a city and county policy to reflect the different building codes and zoning

codes for those shelters.

Ellen said extraterritorial powers that she talked about have been changed up since the city first used it. It used to be that the city could declare extraterritorial powers and the county commissioners up through the legislature had something to say about that, so county commissioners have to sign off on extraterritorial powers and in the case of any health related ordinance, so does the health board.

The health board has directed Ellen to bring the ordinance to the council with the idea that it would eventually go to all three bodies through a joint meeting, depending on how much the council wants to change the ordinance and how the council wants to do that.
Jon asked the committee if there were any questions.

Jon DiBari wanted to know if the health board needed to make a recommendation prior to city and county consideration. Ellen said they did make a recommendation at the April meeting that directed them to come here with the proposed changes, but they still need to hold a hearing to enact it extraterritorially.

Michelle asked about two different sections, first section 8.37.110, specifically section D and wanted to know if violations can be levied against businesses or if person who violates the ordinance. Ellen said it will largely fall to entities because of the nature of the ordinance and she will defer to Jim Nugent if the language meetings the intent. Michelle asked about parks and it would mostly people and with sidewalk cafes it would be mostly cafes. Ellen agreed. Michelle said the fine seems excessive compared to the State fines since state ordinance allows three offenses before charging a fine, so should would like to see that removed. She said she thinks it is interesting that they are moving away from health department enforcement and moving to the law enforcement being able to fine. She thinks there will be a large increase and wants to know how that will be enforced. Ellen is not sure since she is more experienced with the ground they have been enforcing rather than parks and outdoor cafes. Even when the ordinance was new and controversial, they did not have a lot of violations. They worked with the cultural change through education for a long time before they had the rule in effect. In speaking with Donna Gockler, she said they did not want to look at something new in the ordinance and if the park situation was brand new, and Donna said no that they have had the policies and they enforce them through education or through the permits so she did not see that as new. They do not enforce except on complaint. It is not a patrol situation, or they would with a regular licensed establishment inspection.

Michelle wants to know why they are moving to law enforcement when there is nothing to substantiate it. Ellen said you can adjust the rate of the fine, but when you look at how much education enforcement discussion, visits, attorney's office time when you get one entity that won't comply and you finally win the case there is no consequence. The legal strategy that they looked at in one situation was an injunction. She believes that a person who continues to not comply does need consequences but possibly not as high as they proposed.

Annelise wants to know the number of smokers if it is dropping. Smoking is at an all-time low for Montana at both the youth and adult level. A lot of the violations they see are in smoking shelters and a lot of it is due to the decreased smoking use.

Emily added that Chantel Gainer told her that high school girls are more likely to be raped than start smoking, which is alarming but it is nice to know that they can change behavior and we obviously have other programs they need to be investing in.

Heidi Ward wants to know if they can disconnect an entity and a person in the ordinance. She wants to separate the language. She feels for the person that the fines are excessive, but if you have an entity that is continually violating the State standards that is different, and she thinks fines for those situations are appropriate. Is there a reason that it is just defined as any person or can we separate it?

John talked about the fine situation because it is the first offense says a fine not exceeding $100.00 so it can be $1.00.

Michelle agrees with Heidi very much and wants to see the language changed and disagrees with Jon and she thinks She disagrees with Jon and thinks that non-compliance will be figured out within three warnings.

Michelle wanted to talk about the exception section that talks about what hotels need to do in order to have smoking rooms. She thinks the direction that would require hotels to place a sign on the door that indicates whether or not it is a smoking room seems overly specific. She would like to see it changed. Ellen said it is directly from the Montana clean indoor act statute.

Jon said he is concerned about the restaurants that have the patio, if they don't want that as smoking, should the ordinance cover that? Ellen said the restaurants that allow sidewalk cafes the ordinance would say you have to establish it, and you have to put a sign on it. Ellen said the changes show you do have to designate the area as non-smoking and post a sign.

Jon's understanding is they have to have a hearing with the Commissioners. Ellen said they do need a meeting with the County Commissioners so it would become extraterritorial and the Health Department would have to adopt it. Ellen said when they first drafted this it was much more controversial what the ordinance would and wouldn't cover. She is going in with the presumption that is the City ordinance and the council can change the things that is important to them, but if they do have a dual hearing that it would be manageable. Jon stated the problem is when can they hold the public hearing and who is going to coordinate. Ellen said she can make the arrangements with the appropriate city officials to do that, but what she would like to do is before setting it up work through some of the language issues and give Mr. Nugent more time to make sure the language is such that the Council is more likely to agree with it. Ellen suggested bringing the proposal back to council with the proposed language changes.

Heidi asked about cigarettes and if there was a plan to address e-cigarettes in the future. Ellen said they plan on looking at e-cigarettes beyond the frame of the ordinance. Ellen decided that since it was a clean-up ordinance that it would not be appropriate to try to cover e-cigarettes in this ordinance. Kayla is working with the state as far as data, education, and policy.

Jon stated they are going to hold the referral over and asked if Jon Nugent would let the committee know when they were ready to take it up again.

Donna Gockler said when the language was first drafted, she asked Jim Carlson to include some of the park facilities, reason being is most of the rules in Parks are technically rules so the only authority they have as far as staff to ask people to stop doing things, it makes it a difficult situation to put the employees in. She feels there is enough evidence to include parks facilities in the ordinance, predominantly in places where children play or in places where large numbers of people gather. It has been their policy. They have signs, but frequently disappear. She feels there may be complains with the softball and

dugouts. Her observation is that even the ball players walk away from the dugout because their teammates don't want it near them.

She wanted to share that Helen and Havre parks and recreation have eliminated all tobacco use in parks, so they are not going out on a big limb and this ordinance is a good step in between.

Jon added that when he was smoking, he felt he had a right to smoke where he wanted to smoke as long as he was not interfering with someone else, so he would walk away from a crowd, but sometimes the smoke drifted back. Now that he is not a smoker, he does not have the concession that he should have had the right to smoke, and it does affect other people.

Julie wanted clarification about the survey of other fines in Montana and the fines that they impose. Ellen said she does not know if any of the rather towns still have a local smoking ordinance. She will do that homework.

This will be held over when the rewriting is done and it will be put on the agenda.

Jon had a comment about the first issue with Chief Brady, the referral recommended motion says July 20, 2015 so make a note to administratively clean that up.

B Missoula County Carbon Monoxide Second 10-year Limited Maintenance Plan --Sarah Coefield — History

Sarah Cofield is here to talk about the second 10 year limited maintenance plan. It is a standard set in the 70s. It is a colorless and odorless gas and you can basically suffocate in an area that has a high level. In lower doses you can have dizziness, nausea, impaired mental function. The primary sources tent to be motor vehicles but also from wood combustion and also from wildfires. The national standard is an 8 hour standard 9 parts per million to exceed the standard more than once a year. They can have 1 reading that goes over, but the 2nd highest measurement is what they compare. They established the standard in 1977 and Missoula was designated as non-attainment. They last exceeded the standard in 1991. There were several factors of getting that cleaned up. They instituted oxygenated fuels in 1990, 1991. EPA required Missoula do that to reduce carbon monoxide from vehicles. Once they instituted that, they never exceeded the standard again. More recently the low carbon monoxide that they see are because of the fleet turnover. Vehicles have become more efficient. Carbon monoxide is not the pollutant it used to be. The reconfiguration of Brooks and South that has had the highest carbon monoxide levels dramatically reduced idling time One thing about the carbon monoxide is there is more of a hot-spot type of pollutant. There was a resignation request to the EPA in 2005 and in 2007, the EPA approved the request and they became in attainment but entered the 20 year maintenance period. They have to show the EPA they are in attainment. They are in their halfway point and the EPA requires them to send the 2nd ten year maintenance plan. They stopped monitoring for carbon monoxide in 2011 because they are so far below that. The standard is 9, and the 2nd maximum concentration was well below 3. They did an emission inventory to determine the sources of carbon monoxide. Vehicle exhaust is the biggest information.

The primary changes from the previous maintenance plan are that it is a limited maintenance and they can reduce the paperwork and monitoring requirements. They can

stop the monitoring of carbon monoxide and EPA has seen the document and given them a thumbs up. They will track average daily traffic near the orange street bridge, and if it increase by 25% over the 2008-2010 three year average they will see if they need to start checking carbon monoxide again. EPA has approved that

This is an update to the State implementation plan. The Air Pollution Control Board is the lead agency for updates. They have initiated the application and held a hearing on the plan and approved it on May 19th. They are asking that City Council adopt a resolution supporting the implementation plan. It is available for review online.

Jon asked for questions of the committee.

Emily Bentley commented on them to keep up the good work and she said 15 years ago the air was terrible and they have done a good job and made a difference. Jon wanted to add that Malfunction Junction's air was bad.

Bryon von Loss made the motion to recommend the approval to Adopt a resolution supporting the Missoula County Carbon Monoxide Second 10-Year Limited Maintenance Plan.

AYES: Julie Armstrong, Michelle Cares, John DiBari, Jordan Hess, Bryan von Lossberg, Heidi West, Jon Wilkins, Emily Bentley, Annelise Hedahl

ABSENT: Harlan Wells, Gwen Jones

C FY16 Edward Byrne Memorial Justice Assistance Grant --Chief Mike Brady History

(The Committee chair moved this item to first on the agenda)
Chief of Police Mike Brady spoke on the Justice Assistance Grant. This is the 13th year for funding. They have used it for equipment purchases. Last year they used it for one of the three imaging systems. They will continue implementing body cameras as well as updating the body worn microphones for the car systems and continue with replacing some of the older Tasers that are out of warranty and are starting to fail. Part of the money is a pass through to the Sherriff's Office as normal and they have an MOU with them and use it to fund their evidence clerk.

John DiBari wanted to know if it needed to be a joint meeting with the County Commissioner. Chief Brady stated that the requirement of the grant is just that there is a public hearing. Jon was curious because some of the money was going to the county and whether the County Commissioners needed to approve it or not.

Annelise Hedahl moved to approve Set a public hearing on June 27, 2016 concerning the City of Missoula Police Department applying for and accepting a grant award in the amount of $60,373 from the Edward Byrne Memorial Justice Assistance Grant (JAG XIII). $17,249 of this grant will be pass-through to Missoula County. Approve and authorize the Mayor to sign the Memorandum of Understanding and Award Documents for FY'16 Edward Byrne Memorial Justice Assistance Grant (JAG XIII) to be used for the purchase of equipment for the City of Missoula. .

AYES: Julie Armstrong, Michelle Cares, John DiBari, Jordan Hess, Bryan von Lossberg, Heidi West, Jon Wilkins, Emily Bentley, Annelise Hedahl

ABSENT: Harlan Wells, Gwen Jones

IV. Adjournment

Adjourned.

Respectfully submitted,

Stephanie Castillo
Administrative Assistant

Cathy Janney
Administrative Assistant

FORMAL AGENDA
MISSOULA CITY COUNCIL MEETING
CITY COUNCIL CHAMBERS
140 WEST PINE STREET, MISSOULA, MT
June 13, 2016, 7:00 PM

I. CALL TO ORDER AND ROLL CALL

II. APPROVAL OF THE MINUTES

1. Minutes from the June 6, 2016 meeting will be available at a later date. — History

III. SCHEDULE OF COMMITTEE MEETINGS

1. Committee schedule for the week of June 13, 2016 — History

IV. PUBLIC COMMENTS

V. CONSENT AGENDA

(Items on the consent agenda were approved in City Council committees by a unanimous vote. We save time at Council meetings by voting on these items as a package. The City Clerk will read the list aloud, so citizens watching on MCAT will know what is on the consent agenda. We'll invite community comment on these items before we vote.)

1. Claims — History

Recommended motion
Approve claims in the amount of $364,527.97 for checks dated June 14, 2016

2. Missoula County Carbon Monoxide Second 10-year Limited Maintenance Plan — History

PSH
Sarah Coefield

Recommended motion
Adopt a resolution supporting the Missoula County Carbon Monoxide Second 10-Year Limited Maintenance Plan.

3. FY16 Edward Byrne Memorial Justice Assistance Grant — History

PSH
Chief Mike Brady

Recommended motion
Set a public hearing on June 27, 2016 concerning the City of Missoula Police Department applying for and accepting a grant award in the amount of $60,373 from the Edward Byrne Memorial Justice Assistance Grant (JAG XIII). $17,249 of this grant will be pass-through to Missoula County.

4. Appointment to the Parking Commission — History

PW

John Engen

Recommended motion
Confirm the Mayor's appointment of Joseph Easton to the Parking Commission with a term to begin immediately and expire on April 30, 2020.

5. Special State Projects FY 17: Reserve Street & West Broadway on/off Ramps Chip Seal and Orange Street Underpass Mill/Overlay Pave — History

PW
Brian Hensel, Street Superintendent

Recommended motion
Authorize the Mayor to sign an agreement with the Montana Department of Transportation, Appendix C of the Special State Projects for FY17, for on/off ramps at Reserve Street and E. Broadway in the amount of $55,833, and the Orange Street Underpass entrance to exit in the amount of $56,103, for a total of $111,936.

6. Vacating Two Public Utility Easements, One Each in Eddy Addition and Sunnyside Addition — History

PW
Kevin Slovarp, City Engineer

Recommended motion
Adopt a resolution of the Missoula City Council of the City of Missoula, Montana, vacating two public utility easements, the first being a 16 foot wide public utility easement being a portion of Lot 19A of Eddy Addition, Block 16, Lots 16, 17, 18 & 19, and the second being a 20 foot wide public utility easement being a portion of Lots 3 and 4 of Block 18 of Sunnyside Addition both as recorded in the Missoula County Clerk and Recorder's office, Missoula Montana.

7. Reappointment to the Business Improvement District Board — History

A&F
John Engen

Recommended motion
Confirm the Mayor's reappointment of Tim France, as the Small Properties representative of the Business Improvement District Board, for a term beginning June 1, 2016 and ending on May 31, 2020.

8. Award Brownfields funds and approve a contract with North Missoula Community Development Corporation — History

A&F
Nancy Harte

Recommended motion
Approve and authorize the Mayor to sign a grant agreement with the North Missoula Community Development Corporation (NMCDC) and award up to $125,000 in City Brownfields funds to the NMCDC to conduct asbestos abatement, selective demolition for lead-based paint and removal of other hazardous substances at a site located at 503 East Front St. in the City of Missoula.

9. City Rezone: Water Wheel Trails, Mountain Construction, Inc. (Mary McCrea) — History

Recommended motion
[First reading and preliminary adoption] Set a public hearing on June 27, 2016, and preliminarily adopt an ordinance to rezone the Open Space dedicated to the City of Missoula with Phase 1 of Water Wheel Trails Subdivision from unzoned to OP1 Open Space; and, preliminarily adopt an ordinance to rezone Lots 6 through 11, Lots 13 through 29, and Common Area 1 & 2 in Phase 1 of Water Wheel Trails Subdivision, and Water Wheel Trails Subdivision Phase 2, as legally described in Exhibit #1 from unzoned to RT10 Residential, and refer to Land Use and Planning committee.

VI. COMMENTS FROM CITY STAFF, AGENCIES, BOARDS, COMMISSIONS, AUTHORITIES AND THE COMMUNITY FORUM

VII. COMMUNICATIONS FROM THE MAYOR

VIII. GENERAL COMMENTS OF CITY COUNCIL

IX. COMMITTEE REPORTS

(Items listed under Committee Reports were not approved unanimously in City Council committees. The chairperson of the standing City Council committee will make a motion reflecting the committee's actions. We invite community comment on each item.)

1. Administration and Finance Committee Report — History

   a. June 8, 2016 Administration and Finance report — History

2. Committee of the Whole Report — History

   a. June 8, 2016 Committee of the Whole report — History

3. Land Use and Planning Committee Report — History

   a. June 8, 2016 Land Use and Planning report 1:00 pm — History

      i. Ordinance to amend Title 20 to better address tourist homes — History

Land Use & Planning
John DiBari and Bryan von Lossberg

Recommended motion
Direct Development Services staff to initiate an amendment to Title 20, the City's zoning ordinance, to address tourist homes including sending a draft proposal for agency review, Planning Board consideration and recommendation to City Council.

   b. June 8, 2016 Land Use and Planning report 3:00 pm - will be available at a later date — History

4. Public Safety and Health Committee Report — History

a. June 8, 2016 Public Safety and Health report — History

5. Public Works Committee Report — History

a. June 8, 2016 Public Works report — History

X. NEW BUSINESS

XI. ITEMS TO BE REFERRED

(Items listed here have been proposed by Council members, staff, or the Mayor for consideration in City Council committees. Committee chairs are responsible for scheduling consideration of these items in their respective committee meetings. These items are listed on our agenda for information only. They will not be considered at this meeting. For further information about any item, contact the person listed in italics.)

1. Administration and Finance Committee — History

a. Crime Victim Advocate Services Agreement — History
A&F
Dale Bickell

b. Resolution relating to Pooled Special Sidewalk, Curb, Gutter and Alley Approach Bonds; authorizing the issuance of such bonds, making certain findings with respect to the pledge of the Revolving Fund of the City of Missoula to the security therefor — History
A&F
Leigh Griffing

2. Committee of the Whole — History

a. Missoula Organization of Realtors Housing Report — History
COW
Marilyn Marler

3. Land Use and Planning Committee — History

a. Petition No. 8045 – Request to Annex Portions A and B of Boyd Addition, Lots 1A & 2A Subdivision — History
Land Use & Planning
Jenny Baker and Drew Larson, Development Services

b. Petition No. 9788 – Request to Annex a portion of Tract 1 of Certificate of Survey 5995. — History
Land Use & Planning
Drew Larson, Development Services

4. Public Works Committee — History

a. Caras Park Stormwater Outfall Project - Final Design & Construction Administration Services — History
PW
Kevin Slovarp, City Engineer

b. Update Parking Facility ordinance relating to the Americans With Disabilities Act. — History
PW
Michelle Cares

c. Surplus Resolution — History
PW
Jack Stucky

XII. MISCELLANEOUS COMMUNICATIONS, PETITIONS, REPORTS AND ANNOUNCEMENTS

XIII. ADJOURNMENT

The City makes reasonable accommodations for any known disability that may interfere with a person's ability to participate in this meeting. Persons needing accommodation must notify the City Clerk's Office to make needed arrangements. Please call 552-6080 or write to Martha Rehbein, 435 Ryman Street, Missoula, Montana 59802, to make your request known.

MISSOULA CITY COUNCIL ACTION SUMMARY
City Council Chambers
140 West Pine Street
Missoula, Montana
June 13, 2016, 7:00 PM

I. CALL TO ORDER AND ROLL CALL

Present: Mayor John Engen, Julie Armstrong, Ward 5, Emily Bentley, Ward 3, Michelle Cares, Ward 6, John DiBari, Ward 4, Annelise Hedahl, Ward 5, Jordan Hess, Ward 2, Gwen Jones, Ward 3, Marilyn Marler, Ward 6, Harlan Wells, Ward 2, Heidi West, Ward 1, Jon Wilkins, Ward 4.

Absent: Bryan von Lossberg, Ward 1.

II. APPROVAL OF THE MINUTES

1. Minutes from the June 6, 2016 meeting will be available at a later date. -- History

III. SCHEDULE OF COMMITTEE MEETINGS

1. Committee schedule for the week of June 13, 2016 -- History

IV. PUBLIC COMMENTS

V. CONSENT AGENDA

1. Claims -- History

Recommended motion:

Approve claims in the amount of $364,527.97 for checks dated June 14, 2016

Motion:
Approve claims in the amount of $364,527.97 for checks dated June 14, 2016
Vote on the motion to approve:
AYES: Julie Armstrong, Emily Bentley, Michelle Cares, John DiBari, Annelise Hedahl, Jordan Hess, Gwen Jones, Marilyn Marler, Harlan Wells, Heidi West, Jon Wilkins

ABSENT: Bryan von Lossberg
The motion passed.

2. Missoula County Carbon Monoxide Second 10-year Limited Maintenance Plan --Sarah Coefield History

Recommended motion:

Adopt a resolution supporting the Missoula County Carbon Monoxide Second 10-Year Limited Maintenance Plan.

Motion:
Adopt a resolution supporting the Missoula County Carbon Monoxide Second 10-Year

Limited Maintenance Plan.

Vote on the motion to approve:
AYES: Julie Armstrong, Emily Bentley, Michelle Cares, John DiBari, Annelise Hedahl, Jordan Hess, Gwen Jones, Marilyn Marler, Harlan Wells, Heidi West, Jon Wilkins

ABSENT: Bryan von Lossberg
The motion passed.

3. FY16 Edward Byrne Memorial Justice Assistance Grant --Chief Mike Brady — History

Recommended motion:

Set a public hearing on June 27, 2016 concerning the City of Missoula Police Department applying for and accepting a grant award in the amount of $60,373 from the Edward Byrne Memorial Justice Assistance Grant (JAG XIII). $17,249 of this grant will be pass-through to Missoula County.

Motion:
Set a public hearing on June 27, 2016 concerning the City of Missoula Police Department applying for and accepting a grant award in the amount of $60,373 from the Edward Byrne Memorial Justice Assistance Grant (JAG XIII). $17,249 of this grant will be pass-through to Missoula County.
Vote on the motion to approve:
AYES: Julie Armstrong, Emily Bentley, Michelle Cares, John DiBari, Annelise Hedahl, Jordan Hess, Gwen Jones, Marilyn Marler, Harlan Wells, Heidi West, Jon Wilkins

ABSENT: Bryan von Lossberg
The motion passed.

4. Appointment to the Parking Commission — History

Recommended motion:

Confirm the Mayor's appointment of Joseph Easton to the Parking Commission with a term to begin immediately and expire on April 30, 2020.

Motion:
Confirm the Mayor's appointment of Joseph Easton to the Parking Commission with a term to begin immediately and expire on April 30, 2020.
Vote on the motion to approve:
AYES: Julie Armstrong, Emily Bentley, Michelle Cares, John DiBari, Annelise Hedahl, Jordan Hess, Gwen Jones, Marilyn Marler, Harlan Wells, Heidi West, Jon Wilkins

ABSENT: Bryan von Lossberg
The motion passed.

5. Special State Projects FY 17: Reserve Street & West Broadway on/off Ramps Chip Seal and Orange Street Underpass Mill/Overlay Pave — History

Recommended motion:

Authorize the Mayor to sign an agreement with the Montana Department of Transportation, Appendix C of the Special State Projects for FY17, for on/off ramps at Reserve Street and E. Broadway in the amount of $55,833, and the Orange Street Underpass entrance to exit in the amount of $56,103, for a total of $111,936.

Motion:
Authorize the Mayor to sign an agreement with the Montana Department of Transportation, Appendix C of the Special State Projects for FY17, for on/off ramps at Reserve Street and E. Broadway in the amount of $55,833, and the Orange Street Underpass entrance to exit in the amount of $56,103, for a total of $111,936.
Vote on the motion to approve:
AYES: Julie Armstrong, Emily Bentley, Michelle Cares, John DiBari, Annelise Hedahl, Jordan Hess, Gwen Jones, Marilyn Marler, Harlan Wells, Heidi West, Jon Wilkins

ABSENT: Bryan von Lossberg
The motion passed.

6. Vacating Two Public Utility Easements, One Each in Eddy Addition and Sunnyside Addition --Kevin Slovarp, City Engineer — History

Recommended motion:

Adopt a resolution of the Missoula City Council of the City of Missoula, Montana, vacating two public utility easements, the first being a 16 foot wide public utility easement being a portion of Lot 19A of Eddy Addition, Block 16, Lots 16, 17, 18 & 19, and the second being a 20 foot wide public utility easement being a portion of Lots 3 and 4 of Block 18 of Sunnyside Addition both as recorded in the Missoula County Clerk and Recorder's office, Missoula Montana.

Motion:
Adopt a resolution of the Missoula City Council of the City of Missoula, Montana, vacating two public utility easements, the first being a 16 foot wide public utility easement being a portion of Lot 19A of Eddy Addition, Block 16, Lots 16, 17, 18 & 19, and the second being a 20 foot wide public utility easement being a portion of Lots 3 and 4 of Block 18 of Sunnyside Addition both as recorded in the Missoula County Clerk and Recorder's office, Missoula Montana.
Vote on the motion to approve:
AYES: Julie Armstrong, Emily Bentley, Michelle Cares, John DiBari, Annelise Hedahl, Jordan Hess, Gwen Jones, Marilyn Marler, Harlan Wells, Heidi West, Jon Wilkins

ABSENT: Bryan von Lossberg
The motion passed.

7. Reappointment to the Business Improvement District Board --John Engen — History

Recommended motion:

Confirm the Mayor's reappointment of Tim France, as the Small Properties representative of the Business Improvement District Board, for a term beginning June 1, 2016 and ending on May 31, 2020.

Motion:
Confirm the Mayor's reappointment of Tim France, as the Small Properties representative of the Business Improvement District Board, for a term beginning June 1, 2016 and ending on May 31, 2020.
Vote on the motion to approve:
AYES: Julie Armstrong, Emily Bentley, Michelle Cares, John DiBari, Annelise Hedahl, Jordan Hess, Gwen Jones, Marilyn Marler, Harlan Wells, Heidi West, Jon Wilkins

ABSENT: Bryan von Lossberg
The motion passed.

8. Award Brownfields funds and approve a contract with North Missoula Community Development Corporation --Nancy Harte — History

Recommended motion:

Approve and authorize the Mayor to sign a grant agreement with the North Missoula Community Development Corporation (NMCDC) and award up to $125,000 in City Brownfields funds to the NMCDC to conduct asbestos abatement, selective demolition for lead-based paint and removal of other hazardous substances at a site located at 503 East Front St. in the City of Missoula.

Motion:
Approve and authorize the Mayor to sign a grant agreement with the North Missoula Community Development Corporation (NMCDC) and award up to $125,000 in City Brownfields funds to the NMCDC to conduct asbestos abatement, selective demolition for lead-based paint and removal of other hazardous substances at a site located at 503 East Front St. in the City of Missoula.
Vote on the motion to approve:
AYES: Julie Armstrong, Emily Bentley, Michelle Cares, John DiBari, Annelise Hedahl, Jordan Hess, Gwen Jones, Marilyn Marler, Harlan Wells, Heidi West, Jon Wilkins

ABSENT: Bryan von Lossberg
The motion passed.

9. City Rezone: Water Wheel Trails, Mountain Construction, Inc. (Mary McCrea) — History

Recommended motion:

[First reading and preliminary adoption] Set a public hearing on June 27, 2016, and preliminarily adopt an ordinance to rezone the Open Space dedicated to the City of Missoula with Phase 1 of Water Wheel Trails Subdivision from unzoned to OP1 Open Space; and, preliminarily adopt an ordinance to rezone Lots 6 through 11, Lots 13 through 29, and Common Area 1 & 2 in Phase 1 of Water Wheel Trails Subdivision, and Water Wheel Trails Subdivision Phase 2, as legally described in Exhibit #1 from unzoned to RT10 Residential, and refer to Land Use and Planning committee.

Motion:
[First reading and preliminary adoption] Set a public hearing on June 27, 2016, and preliminarily adopt an ordinance to rezone the Open Space dedicated to the City of Missoula with Phase 1 of Water Wheel Trails Subdivision from unzoned to OP1 Open Space; and, preliminarily adopt an ordinance to rezone Lots 6 through 11, Lots 13 through

29, and Common Area 1 & 2 in Phase 1 of Water Wheel Trails Subdivision, and Water Wheel Trails Subdivision Phase 2, as legally described in Exhibit #1 from unzoned to RT10 Residential, and refer to Land Use and Planning committee.
Vote on the motion to approve:
AYES: Julie Armstrong, Emily Bentley, Michelle Cares, John DiBari, Annelise Hedahl, Jordan Hess, Gwen Jones, Marilyn Marler, Harlan Wells, Heidi West, Jon Wilkins

ABSENT: Bryan von Lossberg
The motion passed.

VI. COMMENTS FROM CITY STAFF, AGENCIES, BOARDS, COMMISSIONS, AUTHORITIES AND THE COMMUNITY FORUM

VII. COMMUNICATIONS FROM THE MAYOR

VIII. GENERAL COMMENTS OF CITY COUNCIL

IX. COMMITTEE REPORTS

1. Administration and Finance Committee Report -- History

   a. June 8, 2016 Administration and Finance report-- History

2. Committee of the Whole Report -- History

   a. June 8, 2016 Committee of the Whole report-- History

3. Land Use and Planning Committee Report -- History

   a. June 8, 2016 Land Use and Planning report 1:00 pm-- History

      i. Ordinance to amend Title 20 to better address tourist homes--John DiBari and Bryan von Lossberg **History**

Recommended motion:
Direct Development Services staff to initiate an amendment to Title 20, the City's zoning ordinance, to address tourist homes including sending a draft proposal for agency review, Planning Board consideration and recommendation to City Council.

Motion:
Direct Development Services staff to initiate an amendment to Title 20, the City's zoning ordinance, to address tourist homes including sending a draft proposal for agency review, Planning Board consideration and recommendation to City Council.
Vote on the motion to approve:
AYES: Julie Armstrong, Emily Bentley, John DiBari, Annelise Hedahl, Jordan Hess, Gwen Jones, Marilyn Marler, Harlan Wells, Heidi West, Jon Wilkins
NAYS: Michelle Cares

ABSENT: Bryan von Lossberg
The motion passed.

   b. June 8, 2016 Land Use and Planning report 3:00 pm - will be available at a later date-- History

4. Public Safety and Health Committee Report -- History

a. June 8, 2016 Public Safety and Health report-- History

5. Public Works Committee Report -- History

a. June 8, 2016 Public Works report-- History

X. NEW BUSINESS

XI. ITEMS TO BE REFERRED

1. Administration and Finance Committee -- History

a. Crime Victim Advocate Services Agreement--Dale Bickell History

b. Resolution relating to Pooled Special Sidewalk, Curb, Gutter and Alley Approach Bonds; authorizing the issuance of such bonds, making certain findings with respect to the pledge of the Revolving Fund of the City of Missoula to the security therefor--Leigh Griffing History

2. Committee of the Whole -- History

a. Missoula Organization of Realtors Housing Report--Marilyn Marler History

3. Land Use and Planning Committee -- History

a. Petition No. 8045 – Request to Annex Portions A and B of Boyd Addition, Lots 1A & 2A Subdivision--Jenny Baker and Drew Larson, Development Services History

b. Petition No. 9788 – Request to Annex a portion of Tract 1 of Certificate of Survey 5995.--Drew Larson, Development Services History

4. Public Works Committee -- History

a. Caras Park Stormwater Outfall Project - Final Design & Construction Administration Services History

b. Update Parking Facility ordinance relating to the Americans With Disabilities Act.--Michelle Cares History

c. Surplus Resolution History

XII. MISCELLANEOUS COMMUNICATIONS, PETITIONS, REPORTS AND ANNOUNCEMENTS

XIII. ADJOURNMENT

The meeting adjourned at 7:27 p.m.

Resolution Number 8068

A RESOLUTION SUPPORTING THE MISSOULA COUNTY CARBON MONOXIDE SECOND 10-YEAR LIMITED MAINTENANCE PLAN

WHEREAS, the United States Environmental Protection Agency (EPA) designated a portion of Missoula County, Montana as a non-attainment area for carbon monoxide (CO) in 1978 because of violations of the 8-hour National Ambient Air Quality Standard (NAAQS); and

WHEREAS, on April 3, 1978, Governor Thomas Judge, for purposes of the State Implementation Plan, designated the Missoula City-County Air Pollution Control Board as the lead agency for air quality maintenance planning in Missoula County; and

WHEREAS, on May 27, 2005, Governor Brian Schweitzer submitted a redesignation request and maintenance plan to the EPA and the EPA approved the request and plan on August 17, 2007 and redesignated Missoula as in attainment for carbon monoxide; and

WHEREAS, upon redesignation Missoula entered a 20-year maintenance period for carbon monoxide; and

WHEREAS, EPA requires a second 10-year maintenance plan be submitted mid-way through the maintenance period, and EPA has agreed that Missoula may submit a limited maintenance plan to fulfill this requirement; and

WHEREAS, the Missoula City-County Air Pollution Control Board held a public hearing concerning the second carbon monoxide maintenance plan on May 19, 2016 and adopted the plan at that meeting; and

WHEREAS, the Clean Air Act requires the Missoula City-County Air Pollution Control Board to consult with local elected officials concerning proposed changes to a State Implementation Plan; and

WHEREAS, the Missoula City Council held a public meeting on June 13, 2016 to consider the Missoula County Carbon Monoxide Second 10-Year Limited Maintenance Plan,

NOW THEREFORE, BE IT RESOLVED that the Missoula City Council hereby supports the Missoula County Carbon Monoxide Second 10-Year Limited Maintenance Plan, and urges the Missoula City-County Air Pollution Control Board to continue with the submittal process.

BE IT FURTHER RESOLVED that the Missoula City Council recommends to the Governor of the State of Montana that the Missoula County Carbon Monoxide Second 10-Year Limited Maintenance Plan be forwarded to the EPA for review, approval and inclusion in the Montana State Implementation Plan.

PASSED this 13th day of June, 2016

ATTEST:

/s/ Martha L. Rehbein
Martha L. Rehbein
City Clerk

(SEAL)

CITY OF MISSOULA
THE GARDEN CITY
MISSOULA
HUB OF FIVE VALLEYS
MISSOULA COUNTY, MONTANA

APPROVED:

/s/ John Engen
John Engen
Mayor

STATE OF MONTANA)
COUNTY OF MISSOULA) SS
CITY OF MISSOULA)

I hereby certify that the above and foregoing instrument is a true and correct copy of Resolution 8068 as the same appears upon the records of my office as City Clerk for the City of Missoula, Montana.

Date: 6-20-16

Deputy City Clerk
City of Missoula

BOARD OF COUNTY COMMISSIONERS
ADMINISTRATIVE PUBLIC MEETING AGENDA
MISSOULA COUNTY ADMINISTRATION BUILDING, 199 WEST PINE STREET, ADMIN ROOM 206

DATE & TIME: Thursday, June 9, 2016 - 10:00 AM					**CHAIR/ACTING CHAIR:**
ATTENDANCE:	Brownlow ( )	McDermott ( )	Connors ( )	O'Herren ( )	Wulfekuhle ( )
Commissioners	A. Hughes ( )	Zeier ( )	J. Emery ( )	Farnes ( )	A. Beck ( )
Chair Rowley ( )	Gernant ( )	Berens ( )	Luttschwager ( )	Mansch ( )	J. Marks ( )
Curtiss ( )	Czorny ( )	Lounsbury ( )	Garrett ( )	Robertson ( )	Hart ( )
Rye ( )	Klietz ( )	Hann ( )	Baumgart ( )	Leahy ( )	
Others in Attendance:					

I. PUBLIC COMMENT ON ITEMS NOT ON THE AGENDA:

II. ACTION ITEMS: (A REQUEST FOR COMMISSION ACTION FORM IS REQUIRED)	**Moved**	**Second**	**No/ Abstain**	**Passed**	**Signed**
1. Item: Request chair to adopt a resolution supporting the Missoula County Carbon Monoxide Second 10-Year Limited Maintenance Plan **Motion:**					
2. Item: Request board approval to sign professional services agreement for Glacier Oral & Maxillofacial Surgery, P. C. to provide oral services to clients in Partnership Health Center's Ryan White Program. **Motion:**					
3. Item: Request appointment to Zoning Board of Adjustment. **Motion:**					
4. Item: Request the chair sign an agreement with Digital Current for the purpose of search engine optimization of the Missoula County website. **Motion:**					
5. Item: Request chair approve and sign the agreement with Walden University for practicum placement for a student in the Master's in Public Health Program. **Motion:**					
6. Item: Request chair approve and sign the agreement with Brigham Young University Idaho for student internship placement with Missoula City-County Health Department. **Motion:**					
7. Item: Request approval of grant application to the Montana Healthcare Foundation. **Motion:**					
8. Item: Request approval of Training Agreement between Des Moines University and Partnership Health Center - Missoula County for training experiences for the University's Health profession student. **Motion:**					

9.	**Item:** Request approval of professional services agreement for appraisal of Drew Creek Park between CAPS and Hall-Widdoss & Company **Motion:**					
10.	**Item:** Request signature on contract number 16P03 between Montana Medical Billing, LLC and Partnership Health Center-Missoula County for claim pricing. **Motion:**					
11.	**Item:** Authorize the chair to sign the notice of award to Shadow Asphalt for paving at the Missoula County Fairgrounds. **Motion:**					
12.	**Item:** Authorize chair to sign tri-party lease agreement between T-Mobile, MDT and Missoula County for Seeley Lake Airport Beacon. **Motion:**					
13.	**Item:** Request board consideration of crash history database access agreement with Montana Department of Transportation. **Motion:**					
14.	**Item:** Request consideration of lease to Freedom Gardens of all or a portion of Lot 3, Phase 3C of the Missoula Development Park, known as Lalonde Ranch meets the legal requirements for lease of County property. **Motion:**					

III. CORRESPONDENCE: (A REQUEST FOR COMMISSION ACTION FORM IS NOT REQUIRED)

IV. DISCUSSION ITEMS: (A REQUEST FOR COMMISSION ACTION FORM IS NOT REQUIRED)

V. UPCOMING EVENTS AND INVITATIONS:

1. **2016 Legislators' Lunch- June 15 @ 11:30 - 1:00 Missoula Fire Station #4**
2. **Discussion on the future of the Clark Fork River w/ Mayor - Wednesday June 22nd 12:00 - 2:00 GLR Law Offices.**
3. **City Club Missoula - DUI in Missoula County: The Sobering Facts - Monday June 13 @ 11:30 - 1:00 @ DoubleTree**

VI. OTHER COMMENTS/INSTRUCTIONS:

VII. REVIEW OF THURSDAY'S SCHEDULE		
9:00 - 10:00	BCC	Board Interviews
10:00 - 11:00	BCC	Administrative Public Meeting
11:00 - 3:00	CUR	Human Resource Council Board
1:30 - 3:30	SR	Parks & Trails Advisory Board
3:30 - 4:30	BCC	Compensation Board Discuss Longevity
6:00 - 7:30	BCC	Bureau of Land Management Dinner

VIII. REVIEW OF FRIDAY'S SCHEDULE		
9:00 - 10:00	BCC	Board Interviews
10:00 - 12:00	CR	Midtown Mojo Team
10:30 - 11:00	SR	TPCC Update- Jessica Morriss
12:00 - 1:30	CR	Partnership Health Center Board

RESOLUTION NO. 2016-083

A RESOLUTION SUPPORTING THE MISSOULA COUNTY CARBON MONOXIDE SECOND 10-YEAR LIMITED MAINTENANCE PLAN

WHEREAS, the United States Environmental Protection Agency (EPA) designated a portion of Missoula County, Montana as a non-attainment area for carbon monoxide in 1978 because of violations of the 8-hour National Ambient Air Quality Standard (NAAQS); and

WHEREAS, on April 3, 1978, Governor Thomas Judge, for purposes of the State Implementation Plan, designated the Missoula City-County Air Pollution Control Board as the lead agency for air quality maintenance planning in Missoula County; and

WHEREAS, on May 27, 2005, Governor Brian Schweitzer submitted a redesignation request and maintenance plan to the EPA and the EPA approved the request and plan on August 17, 2007 and redesignated Missoula as in attainment for carbon monoxide; and

WHEREAS, upon redesignation Missoula entered a 20-year maintenance period for carbon monoxide; and

WHEREAS, EPA requires a second 10-year maintenance plan be submitted mid-way through the maintenance period, and EPA has agreed that Missoula may submit a limited maintenance plan to fulfill this requirement; and

WHEREAS, the Missoula City-County Air Pollution Control Board held a public hearing concerning the second 10-year carbon monoxide limited maintenance plan on May 19, 2016 and adopted the plan at that meeting; and

WHEREAS, the Clean Air Act requires the Missoula City-County Air Pollution Control Board to consult with local elected officials concerning proposed changes to a State Implementation Plan; and

WHEREAS, the Missoula County Commission held a public meeting on June 9, 2016 to consider the Missoula County Carbon Monoxide Second 10-Year Limited Maintenance Plan,

NOW THEREFORE, BE IT RESOLVED that the Missoula County Commission hereby supports the Missoula County Carbon Monoxide Second 10-Year Limited Maintenance Plan, and urges the Missoula City-County Air Pollution Control Board to continue with the submittal process.

BE IT FURTHER RESOLVED that the Missoula County Commission recommends to the Governor of the State of Montana that that Missoula County Carbon Monoxide Second 10-Year Limited Maintenance Plan be forwarded to the EPA for review, approval and inclusion in the Montana State Implementation Plan.

DATED THIS 9th DAY OF June, 2016

BOARD OF COUNTY COMMISSIONERS
MISSOULA COUNTY, MONTANA

Nicole Rowley, Chair

Jean Curtiss, Commissioner

Stacy Rye, Commissioner

ATTEST:

Clerk & Recorder

Missoula Public Health
City-County Health Department

Missoula City-County Health Department
AIR QUALITY PROGRAM
301 West Alder Street | Missoula MT 59802-4123
www.missoulacounty.us/HealthDept
Phone | 406.258.4755
Fax | 406.258.4781

Missoula County Carbon Monoxide Second 10-Year Limited Maintenance Plan
Response to Public Comments

Comments received during the local adoption process, public comment period (May 8, 2016 – May 19, 2016) and at the Air Pollution Control Board public hearing (May 19, 2016)

Comment 1 of 1

Bill Flanery, Missoula City-County Air Quality Advisory Council:
The maintenance area boundaries haven't changed despite the growing Missoula population. It may be time to extend the boundary.

Response to Comment

The requested change was not incorporated into the document. The Carbon Monoxide (CO) Maintenance Area boundaries were set when Missoula was first declared non-attainment, and a boundary change isn't part of the Limited Maintenance Plan. In addition, the Missoula City-County Health Department conducted a CO saturation study in the 2000s and found that Malfunction Junction (in the middle of the maintenance area) still has some of the highest CO concentrations in Missoula – even comparable with the CO along north Reserve Street. Because CO is a "hotspot" pollutant, it is appropriate to have boundaries that encompass the areas with the highest CO concentrations. The current maintenance area boundaries extend quite far beyond Malfunction Junction and north Reserve Street, and are therefore still appropriate. In addition, the CO levels at the hotspots in Missoula are well below the National Ambient Air Quality Standard, and there are no indications that the boundary should be expanded.

APPENDIX E: STATE RECORD OF ADOPTION