

National Ambient Air Quality Standard Exceedances since 2002 Attributable to the Burning of Rangeland in the Kansas Flint Hills 12-13-16

Ozone exceedances in Kansas and Missouri

Monitored Values since 2002 that did exceed, or would have exceeded the 75 ppb NAAQS standard promulgated in March, 2008. The Konza Prairie CASTNET monitor, near Manhattan, Ks., which was shut just prior to the 2013 burn season, had not been used for compliance purposes up to that time. Monitors operate continuously.

2003

4-01 Liberty, Mo. 84 ppb
4-10 Konza Prairie (CastNet) 82 ppb
4-11 Watkins Mill, Mo. 80 ppb
4-12 Liberty, Mo. 93 ppb
4-12 Konza Prairie 81 ppb
4-13 Liberty, Mo. 87 ppb

2004

4-06 Liberty, Mo. 77 ppb

2005

4-02 Konza Prairie 78 ppb
4-14 Konza Prairie 87 ppb
4-15 Konza Prairie 81 ppb
4-17 Liberty, Mo. 80 ppb
4-17 KCMO (R. Gebauer) 80 ppb

2006

4-09 Konza Prairie 76 ppb
4-22 Konza Prairie 80 ppb
4-22 KCMO (R. Gebauer) 80 ppb

2008

4-05 Konza Prairie 77 ppb
4-14 Konza Prairie 76 ppb
4-20 Konza Prairie 78 ppb

2009

4-07 KCMO (R. Gebauer) 87 ppb
4-08 Wichita, Ks. 80, 81 & 95 ppb

2010

4-09 Topeka, Ks. 82 ppb
4-10 Topeka, Ks. 78 ppb
4-11 Konza Prairie 81 ppb
4-17 Wichita, Ks 77 ppb

4-19 Konza Prairie 78 ppb

2011

4-06 Mine Creek, Ks. 76 ppb
4-06 Wichita, Ks 79 & 82 ppb
4-12 Konza Prairie 78 ppb
4-12 Topeka, Ks 84 ppb
4-12 Watkins Mill, Mo. 76 ppb
4-13 Konza Prairie 79 ppb

2012 & 2013 Burning much reduced because of drought.

2014

4-11 Wichita, Ks. 77, 79 & 85 ppb

2015

4- 10 Chanute, Ks. 77 ppb

2016

4-04 Wichita Health Dept 103 ppb, Sedgwick Co. 78 ppb

PM2.5 exceedances in Kansas

Monitored Values of PM2.5 since 2002 in Kansas that did exceed or would have exceeded the current NAAQS of 35 ug/M3. The current standard was promulgated in 2006. Monitors operate only every 3rd day.

2003

4-09 Chase County (Improve) 58.8 ug/M3
4-12 Topeka 57.1 ug/m3
4-12 Topeka 63.9 ug/M3
4-12 Chase Co. (Improve) 41.0 ug/M3

2004

4-06 Kansas City 37.4 and 39.3 ug/M3
4-06 Topeka 36.7 and 39.3 ug/M3

2011

4-12 Topeka 40.8 ug/m3

2012 & 2013 Burning much reduced because of drought.

2014

4-05 Wichita 49.5, 50.5, and 42.5 ug/M3

4-05 Sumner County 50.6 ug/M3

4-05 Chase County (*Improve*) 59.2 ug/M3

NAAQS Exceedances in Nebraska

Lincoln and Omaha each have one continuous PM2.5 monitor. Ozone monitors are continuous.

A. Ozone

2003

4-13 Douglas County - Omaha 76 ppb

2015

4 - 11 Douglas Co.- Omaha (NCORE) 76 ppb

4 - 11 Douglas Co. Omaha -0053 77 ppb

B. PM2.5

2003

4-11 Douglas Co. Omaha 37.5 ug/M3

2005

4-03 Douglas Co. - Omaha 38.2 ug/M3

2008

4-05 Douglas Co. Omaha 36.8 ug/M3

2014

3 - 30 Lincoln LLCHD - monitors* 36.5 ug/M3

4 - 06 Lincoln BAM 38.6 ug/M3

4 - 12 Omaha - Bellevue 37.4 ug/M3

4 - 18 Lincoln BAM 60.5 ug/M3

2016

4 - 13 Lincoln BAM 53 ug/M3

4 - 14 Omaha - Bellevue 43.1 ug/M3

4 - 14 Omaha - NCORE BAM 45.8 ug/M3

* The Lincoln-Lancaster County Health Department (LLCHD) has two federal reference monitors, one sampling every sixth day co-located with another sampling every 3rd day, plus a "BAM" continuous monitor. On March 30, the measured 24 hour values were 38.7, 32.1 and 38.7 ug/M3 respectively, for an average of 36.5 ug/M3.

The LLCHD operates a "beta attenuation" continuous monitor (BAM) for the purpose of issuing health advisories. This data is reported to *Air Now* for the Air Quality Index but is not used for NAAQS compliance purposes. Bellevue is also a continuous BAM monitor that *is* used for compliance purposes.

Ozone & PM2.5 Exceedances in Ponca City, Oklahoma

This monitoring station is situated at the south-southwestern edge of the Flint Hills. Prior to 2008, one or more filter-based PM2.5 monitors were used, operating only every third and/or sixth day. In 2008 a continuous PM2.5 filter was installed. There are no continuous PM2.5 monitors in Kansas, west of Kansas City or east of the Cedar Bluff station, a distance of some 280 miles. Thus plumes must reach, Lincoln or Omaha, Neb. the next day to get a reading when the winds are southerly, or Ponca City when the winds are northerly. The Ponca City monitor would be affected by burning both in Oklahoma and Kansas.

A. Ozone

2009

4 - 08 84 ppb

2011

4-06 80 ppb

4-13 78 ppb

2014

4 -11 77 ppb

B. PM2.5

2003

4-09 36.3 & 49.3

2005

3-20 42.7

2009

4-08 69.7

4-11 36.6

2011 No monitor operating

2014

3-29 37.5

4-05 36.6

2015

4-11 37.9 (Mostly local burns in Oklahoma near Ks. state line)

2016

4-04 45.8