November 25, 2008

MEMORANDUM

SUBJECT: Analysis Demonstrating Attainment of the 1-Hour Ozone National Ambient Air Quality Standards (NAAQS) for the Milwaukee-Racine Severe Ozone Nonattainment Area

FROM: Larry Bruss, Section Chief
Regional Pollutant and Mobile Source Section

TO: John H. Melby, Jr., Bureau Director
Air Management Bureau

The purpose of this memorandum is to demonstrate that the Milwaukee-Racine Severe Ozone Nonattainment Area has successfully met the previous 1-hour federal ambient air quality standard for ozone. This area includes Milwaukee, Waukesha, Ozaukee, Kenosha, and Racine Counties (hereinafter Milwaukee MSA).

As required by the 1990 Clean Air Act Amendments, the U.S. Environmental Protection Agency (EPA) identified all areas violating the 1-hour ozone standard as nonattainment areas. The Milwaukee MSA was designated as a severe nonattainment area and given 17-years from the time of designation in 1990 to achieve attainment of the 1-hour ozone standard. The primary and secondary 1-hour Wisconsin ambient air quality standards for ozone are set forth in s. NR 404.04(5), Wis. Adm. Code, and are specific levels of air quality which are deemed necessary to provide adequate protection for public health and welfare. The State 1-hour ozone ambient air quality standards are identical to the previous federal 1-hour ozone NAAQS.

The primary and secondary ambient air quality standards for 1-hour ozone are 0.12 parts per million (ppm) measured as the maximum hourly average concentration. A monitoring site attains the standard if the fourth highest 1-hour ozone concentration value is equal to, or less than, 0.12 ppm, during a 3-year period.

On June 15, 2005 the EPA revoked the 1-hour federal ambient air quality ozone standard for all areas of the nation, except the 8-hour ozone nonattainment Early Action Compact Areas. A series of federal Circuit Court decisions required that states implement Clean Air Act (CAA) provisions for severe or extreme 1-hour ozone nonattainment areas, such as the Milwaukee MSA.

Redesignation of the Milwaukee MSA to attainment of the 1-hour ambient air quality standard for ozone would have several implications for the State of Wisconsin. Redesignation will help eliminate the confusion related to definition of major source. A 25 ton/year major source definition applies under the severe classification for the 1-hour standard. While a 100

ton/year definition applies for moderate nonattainment areas. Since the Milwaukee MSA is designated as moderate for the 8-hour standard and EPA has revoked the 1-hour standard, the 100 ton/year major source definition applies. However, since the Milwaukee MSA was never redesignated to attainment for the 1-hour standard, there is lingering confusing regarding the definition of major source in the Milwaukee MSA. In addition, redesignation of the Milwaukee MSA to attainment for the 1-hour standard clarifies that large VOC sources are not required to pay fees under NR 410.06, Wis. Adm. Code, which implements the section 185 penalty provisions in the Clean Air Act.

Based on fully quality-assured ambient air quality monitoring data from 2003 through 2008, the Milwaukee MSA has attained, and continues to attain, the 1-hour ozone standard. Figure 1 shows the ozone monitoring locations in Eastern Wisconsin. The four counties shaded in light gray (Door, Kewaunee, Manitowoc, and Sheboygan) attained the 1-hour ozone standard and were redesignated to attainment prior to 2003. The Milwaukee MSA is indicated by the counties shaded in dark gray.

Table 1 indicates the number of daily maximum 1-hour ozone values that are greater than or equal to 0.125 ppm for a given 3-year period. None of the monitoring sites in the 6-county area measured more than two exceedances. In the most recent 3-year period, no sites in the Milwaukee MSA measured a daily maximum 1-hour ozone value greater than or equal to 0.125 ppm. In addition, daily maximum 1-hour ozone concentrations have been trending downward since 2003. Figures 2 through 5 show the daily maximum 1-hour ozone concentrations for each ozone season (April 15 – October 15) from 2003 through 2008 at the Bayside, Grafton, Harrington Beach, and Pleasant Prairie monitors. Each monitoring site exhibits a downward linear trend in daily maximum 1-hour ozone concentration during this period. The rate of decrease for these monitoring locations varies from 0.40 parts per billion (ppb) per ozone season to 1.31 ppb per ozone season. Daily maximum 1-hour ozone concentrations have been maintained well below 0.12 ppm, or 125 ppb. Since 2006, the highest 1-hour ozone concentration measured at these four sites was 112 ppb at the Pleasant Prairie monitor on June 16, 2007.

Based on the data presented, the Milwaukee MSA has met, and continues to meet, the 1-hour ozone standard and should be redesignated as an attainment area. DNR has the authority to reclassify a nonattainment area as an attainment area under s. 144.371, Wis. Stats., and ch. NR 401, Wis. Adm. Code. All other aspects of Wisconsin's ozone control program and the related air quality management program commitments in the Milwaukee MSA would remain as currently adopted and approved by the EPA.

cc: Joseph Hoch – AM/7

Attachments:

1. **Table 1**: 1-Hour Ozone Violation Assessment 2003 – 2008
2. **Figure 1**: Ozone Monitoring Locations in Eastern Wisconsin
3. **Figures 2 - 5**: Daily Maximum 1-Hour Ozone Concentrations from 2003 – 2008 (April 15 – October 15) for Bayside, Grafton, Harrington Beach, and Pleasant Prairie

TABLE 1: 1-Hour Ozone Violation Assessment 2003 – 2008

SITE ID	COUNTY	SITE NAME	# days ≥ 0.125 ppm				In Violation?
			2003-2005	2004-2006	2005-2007	2006-2008 [e]	
550590019	Kenosha	Pleasant Prairie	0	0	0	0	No
550790010	Milwaukee	16th St Health Center	0 [a]	0	0	0	No
550790026	Milwaukee	SER-HQ	1	1	1	0	No
550790041	Milwaukee	UWM North	2	2	2	0	No
550790044	Milwaukee	Appleton Avenue	0	--- [b]	--- [b]	--- [b]	No
550790085	Milwaukee	Bayside	2	2	2	0	No
550890008	Ozaukee	Grafton	1	1	1	0	No
550890009	Ozaukee	Harrington Beach	2	1	1	0	No
551010017	Racine	Racine	0	0	0	0	No
551310009	Washington	Slinger	0	0	0	0	No
551330017	Waukesha	Carroll College	0	--- [c]	--- [c]	--- [c]	No
551330027	Waukesha	Cleveland Avenue	--- [d]	0	0	0	No

Notes:

(a) Data completeness at 550790010 in 2003 was 62%. This does not meet US EPA's 75% completeness criterion. Hence, the 3rd high ozone value was used to determine the design value for 2003-2005. That value is 0.097 ppm.

(b) The ozone monitor at Appleton Avenue in Milwaukee (550790044) was removed from service after the 2005 monitoring season. Therefore a violation determination can be made only for the period 2003-2005.

(c.) The Carroll College site (551330017) was shut down after the 2005 ozone monitoring season because the building where the monitor was located was razed.

(d) Ozone monitoring at the Cleveland Avenue site (551330027) began in 2004. A violation assessment cannot be completed for 2003-2005 due to the lack of data.

(e) Ozone monitoring data from 08/31/2008 – 10/15/2008 is preliminary data for all sites except Racine, where data is preliminary from 08/01/2008 – 10/15/2008.

FIGURE 1: Ozone Monitoring Locations in Eastern Wisconsin

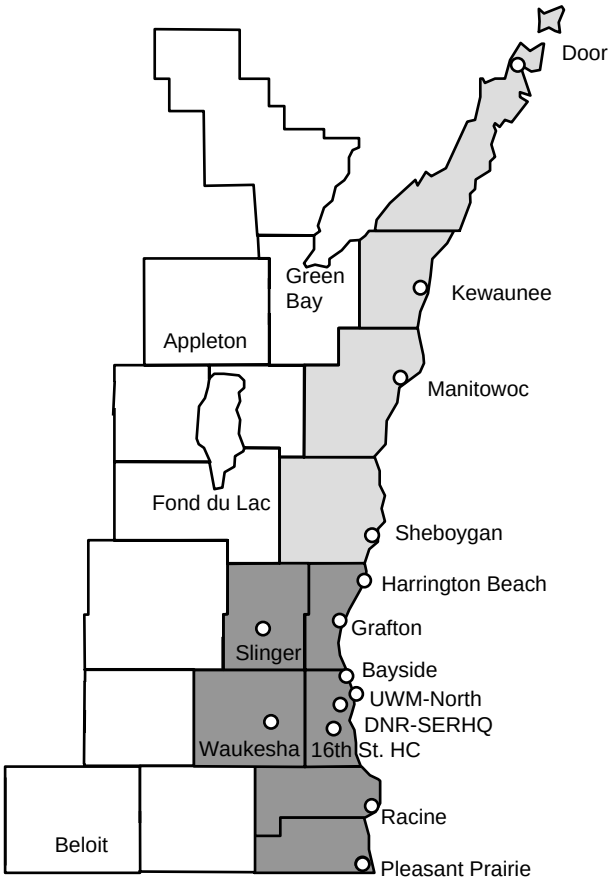

FIGURE 2: BAYSIDE (550790085) - Milwaukee County

Daily Maximum 1-Hour Ozone Concentration from 2003 - 2008 (April 15 - October 15)

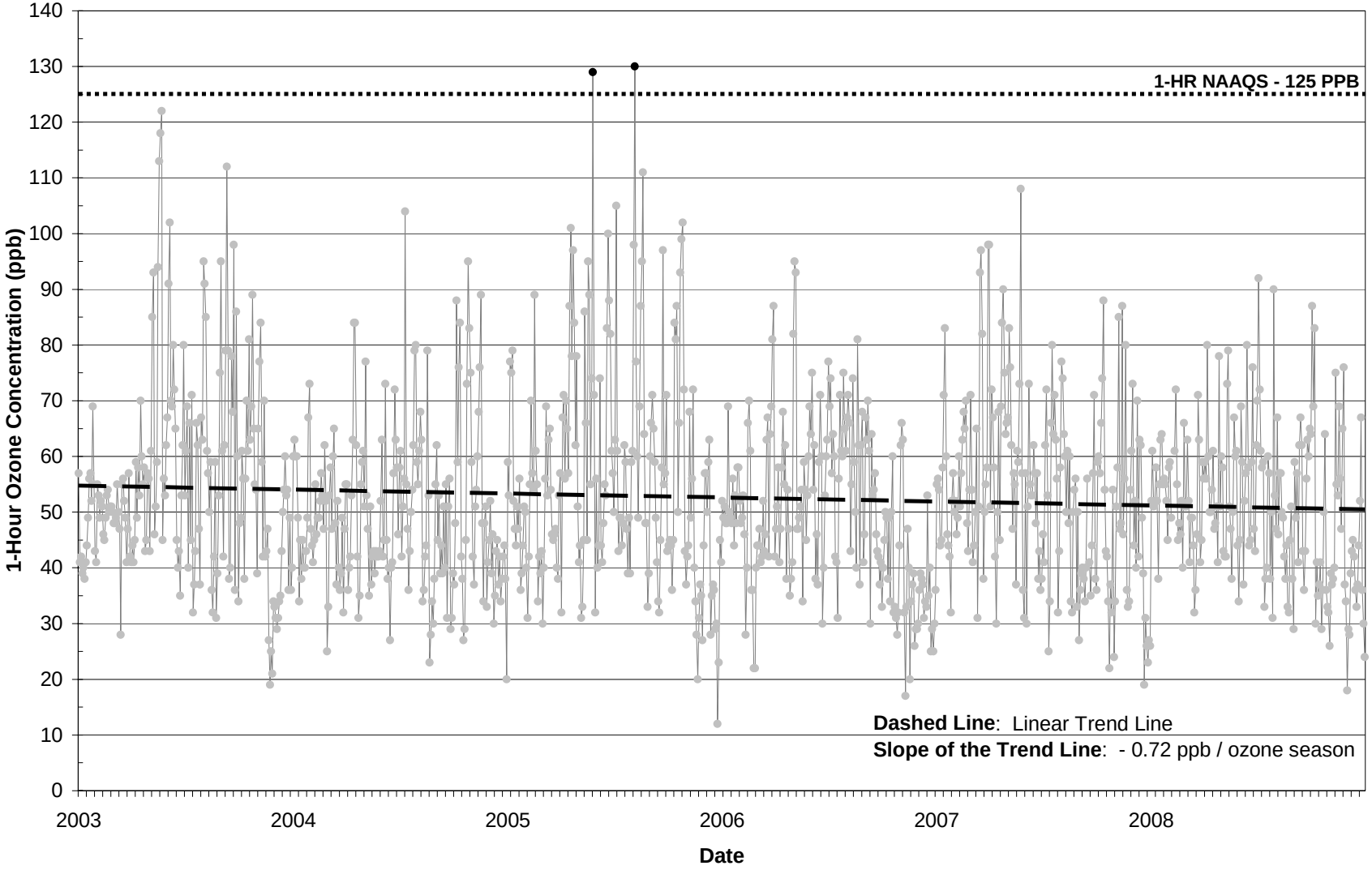

FIGURE 3: GRAFTON (550890008) - Ozaukee County

Daily Maximum 1-Hour Ozone Concentration from 2003 - 2008 (April 15 - October 15)

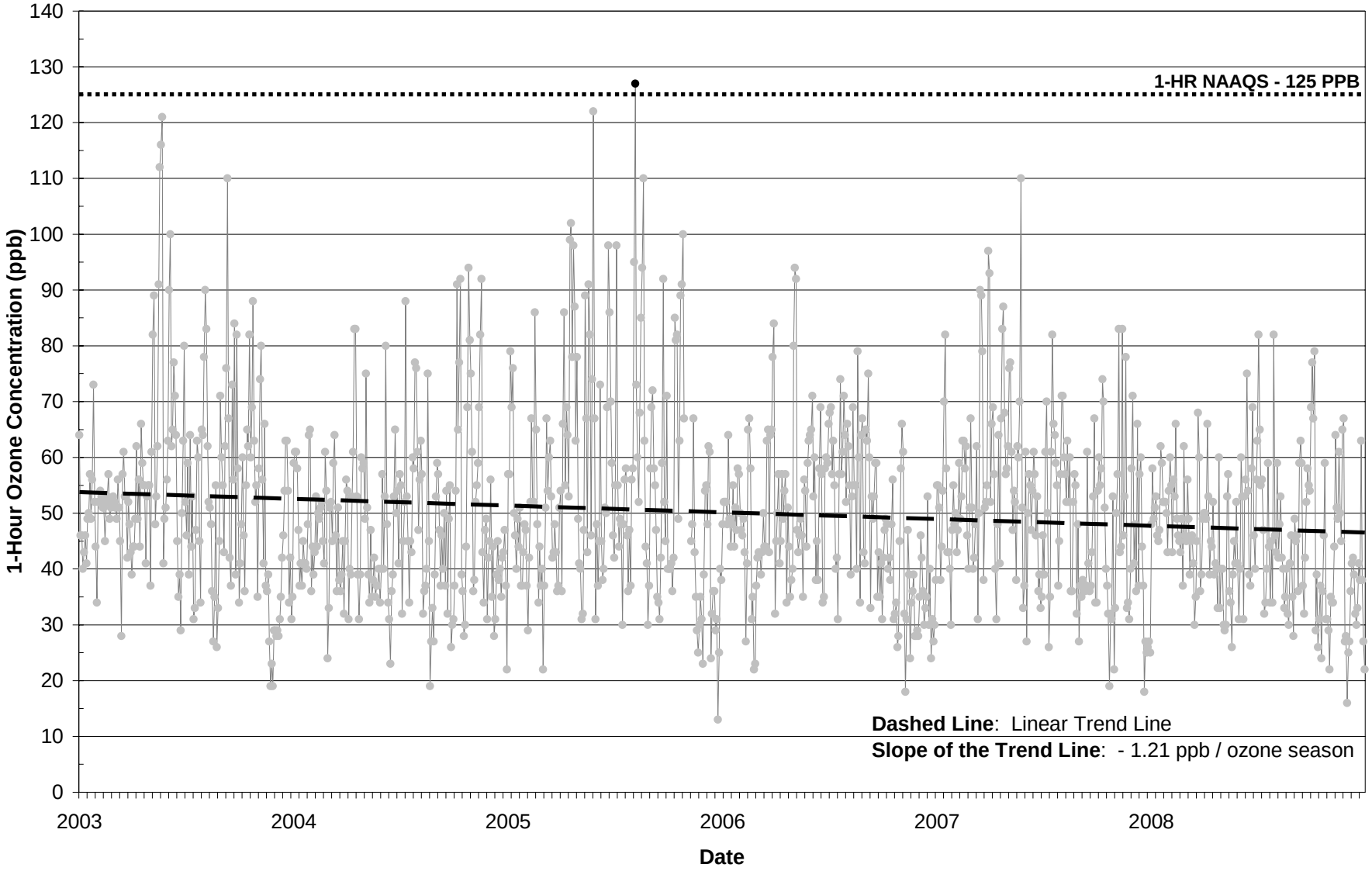

FIGURE 4: HARRINGTON BEACH (550890009) - Ozaukee County

Daily Maximum 1-Hour Ozone Concentration from 2003 - 2008 (April 15 - October 15)

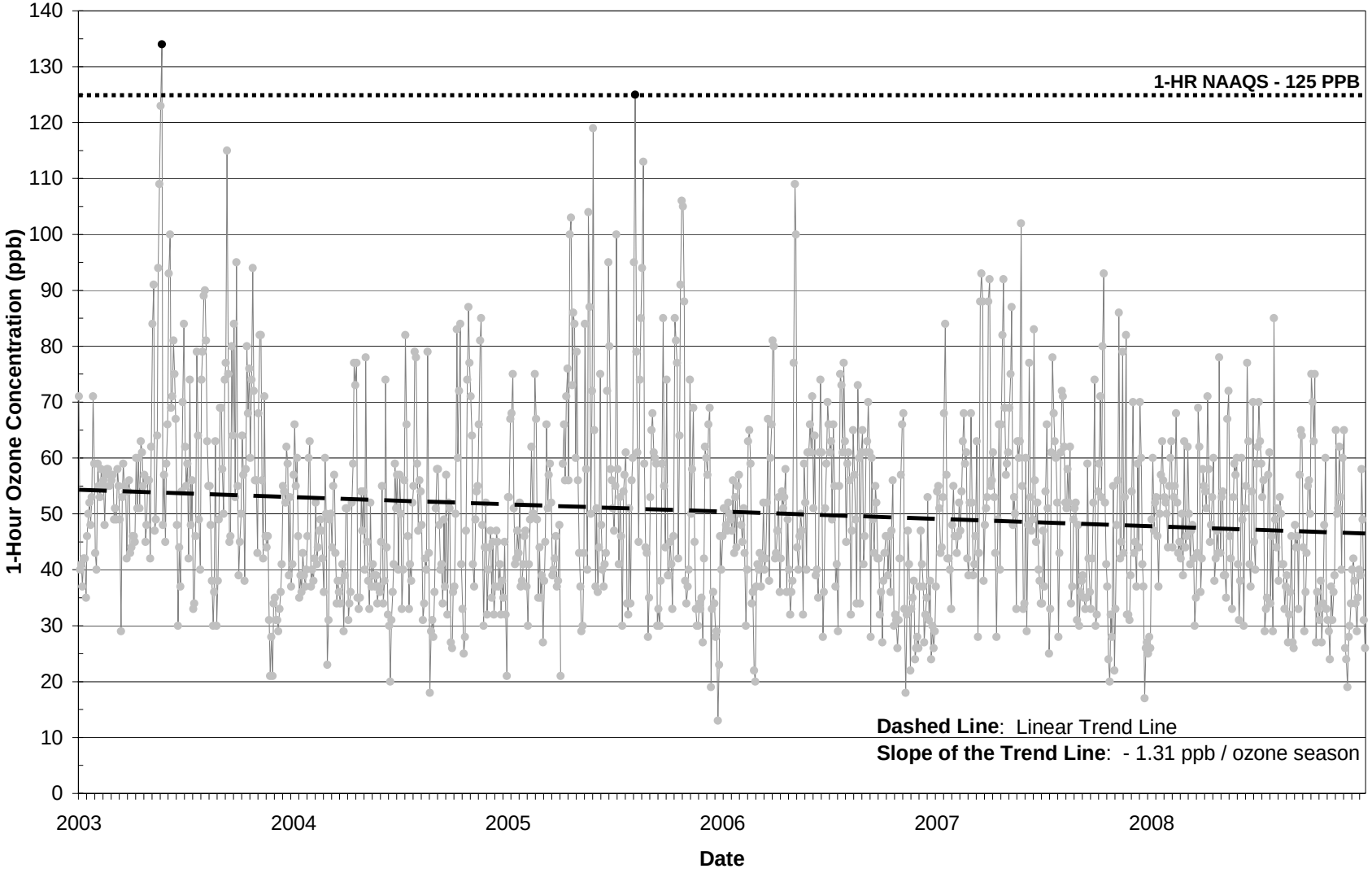

FIGURE 5: PLEASANT PRAIRIE (550590019) - Kenosha County

Daily Maximum 1-Hour Ozone Concentration from 2003 - 2008 (April 15 - October 15)