

# **Jefferson County Ozone Meeting**

November 16, 2012

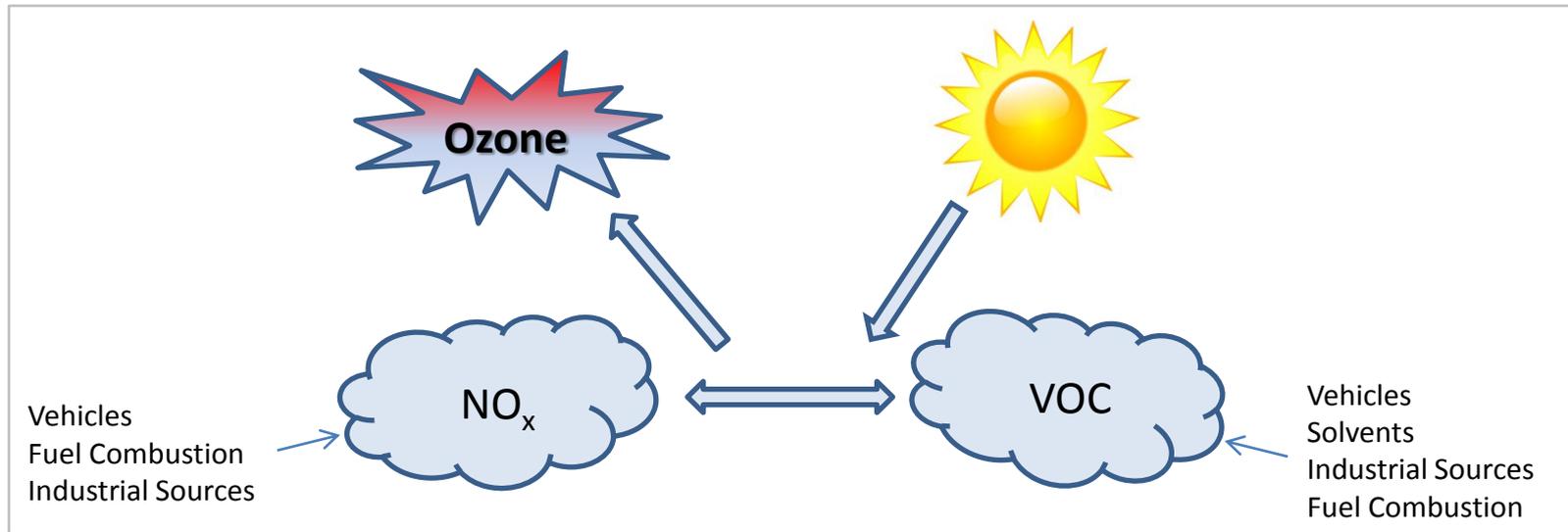
Grant Hetherington

Air Monitoring Data Manager

Wisconsin Department of Natural Resources

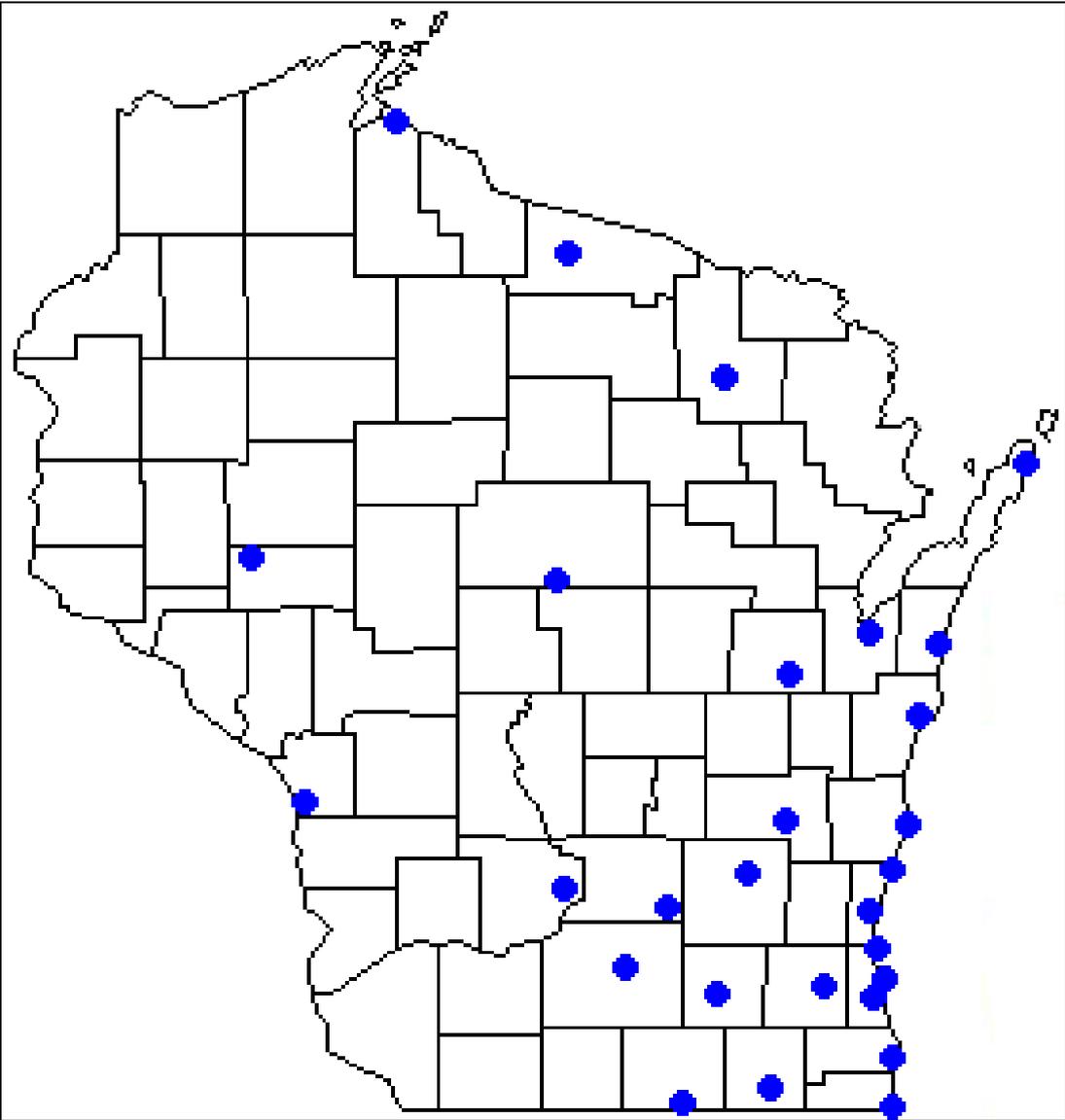
# Background on Ozone

Ground-level ozone is not emitted directly into the air, but is created by chemical reactions between oxides of nitrogen ( $\text{NO}_x$ ) and volatile organic compounds (VOC) in the presence of sunlight. Wisconsin's ozone season runs from April 15<sup>th</sup> through October 15<sup>th</sup>.

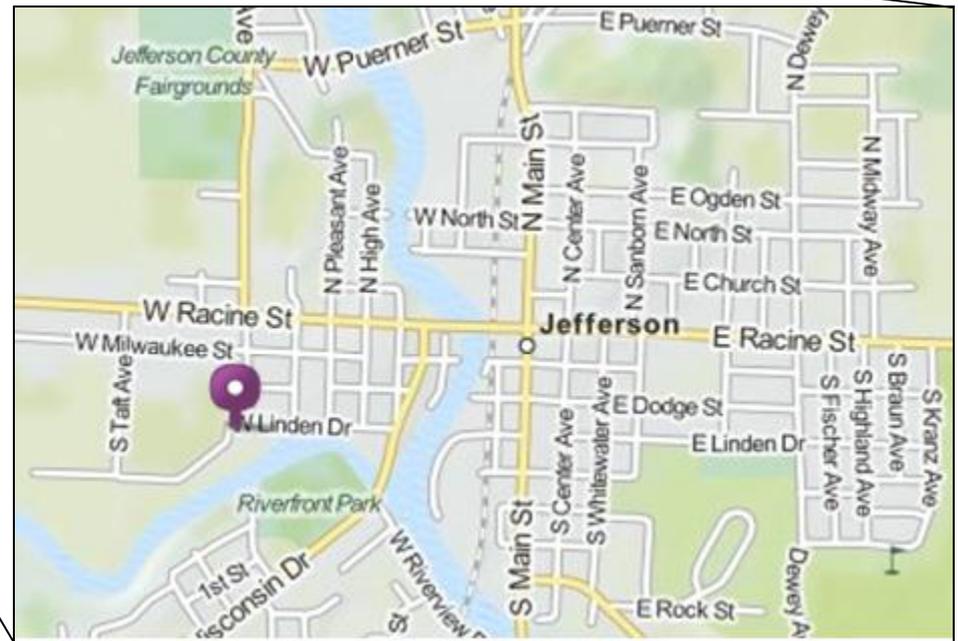


Ozone can harm our health. People with lung disease, children, older adults and people who are active outdoors may be particularly sensitive to ozone. Ozone also affects sensitive vegetation and ecosystems.

# Ozone Monitoring Network in Wisconsin



# Ozone Monitoring in Jefferson County



# How Compliance with National Ambient Air Quality Standards (NAAQS) is Determined

“**Design Value**”: A statistic that describes the air quality status of a given location relative to the level of the NAAQS.

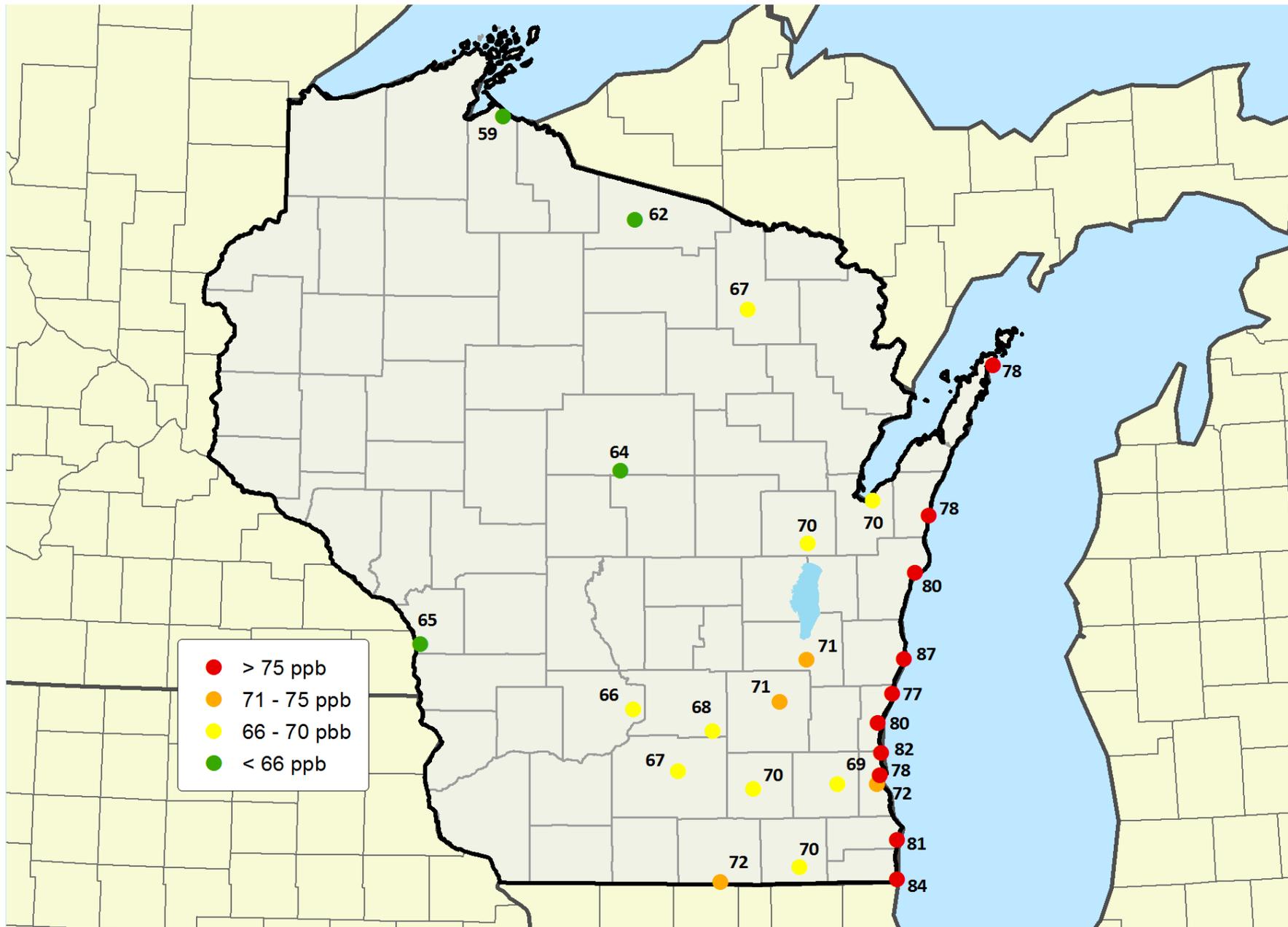
Ozone design values are calculated as follows:

1. Calculate 8-hour rolling ozone averages (example – average ozone concentration from 1pm – 9pm, 2pm – 10pm, 3pm – 11pm, etc.).
2. Determine the maximum 8-hour concentration for each day from April 15<sup>th</sup> – October 15<sup>th</sup>.
3. Sort the maximum 8-hour concentrations from highest to lowest.
4. Select the fourth highest 8-hour concentration for the year.
5. Calculate a 3-year average.

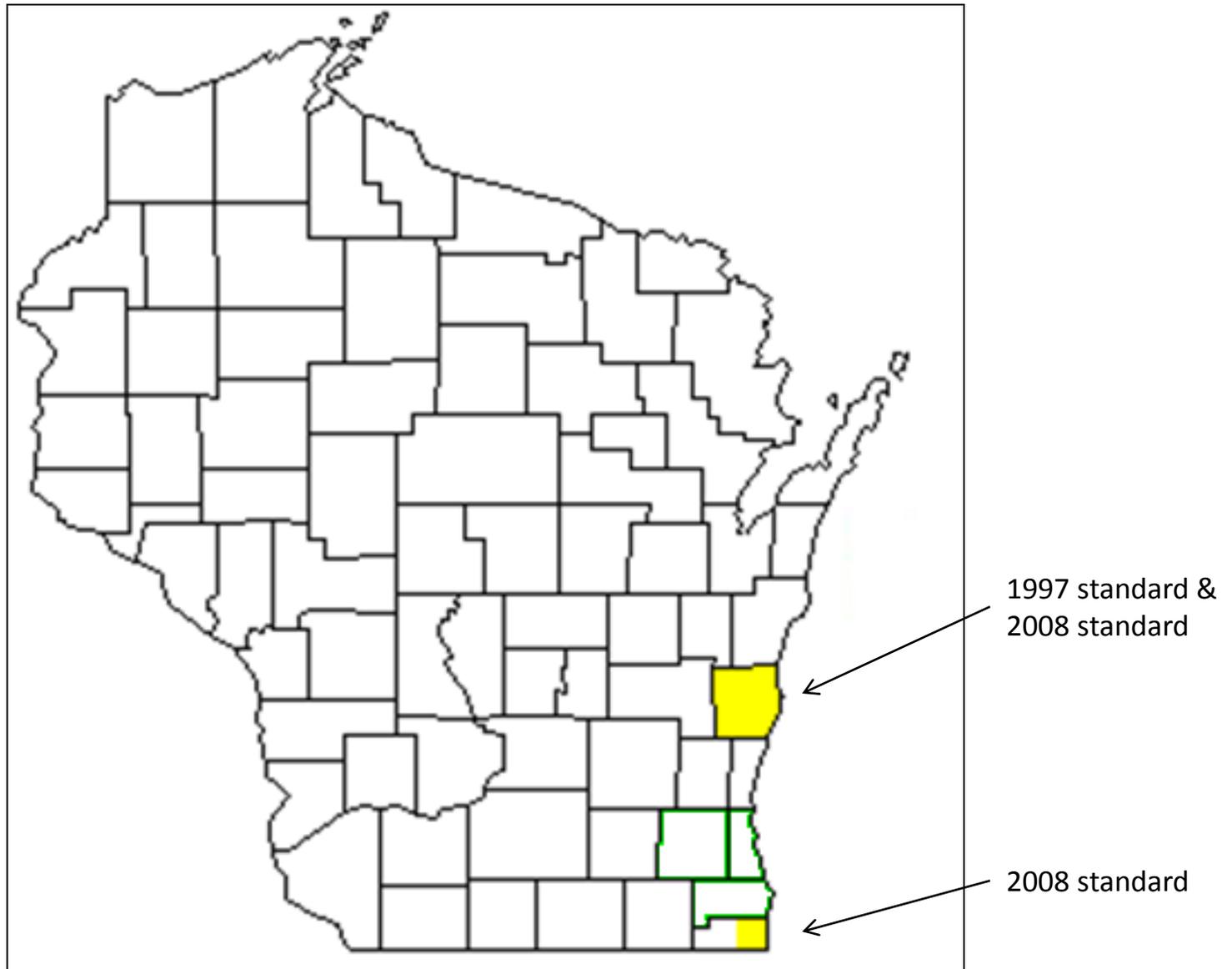
# Ozone Design Values in Jefferson County



# Preliminary Ozone Design Values in Wisconsin (2010 - 2012)



# Current Ozone Nonattainment Areas in Wisconsin

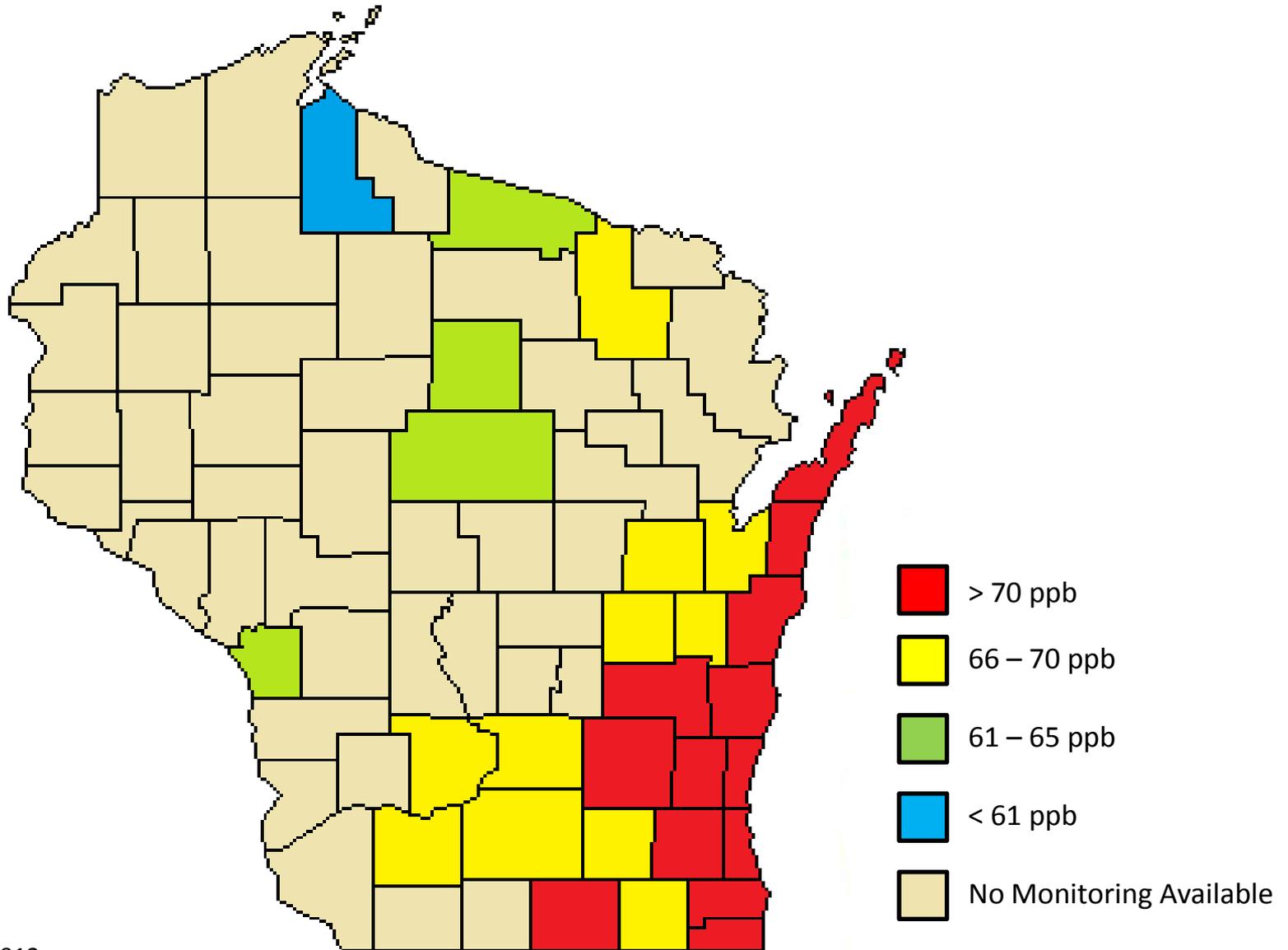


# Future Ozone Standards

The U.S. Environmental Protection Agency (EPA) has indicated that they intend to propose a new ozone standard at the end of 2013. They have indicated in some of their early planning documents (e.g., Risk and Exposure Assessment and Policy Assessment) that 60 – 70 parts per billion (ppb) may be an appropriate range for a new standard <sup>1</sup>. However, the official proposal will not be released until the end of 2013.

<sup>1</sup> [http://www.epa.gov/ttn/naaqs/standards/ozone/s\\_o3\\_index.html](http://www.epa.gov/ttn/naaqs/standards/ozone/s_o3_index.html)

# Potential Ozone Nonattainment Areas in Wisconsin



Based on 2010 – 2012  
Preliminary Design Values

# Potential Implementation Timeline for a New Ozone NAAQS

- End of 2013: U.S. EPA proposes a new ozone standard
- Mid- to Late-2014: U.S. EPA finalizes a new ozone standard
- 2015 – 2016: U.S. EPA finalizes nonattainment areas [*based on latest 3 years of monitoring data*]

# Regulatory Implications of Ozone Nonattainment

## Overview of CAA Ozone Planning & Control Requirements by Classification

		NSR offset ratio	Major source threshold
<b>EXTREME</b> (20 years to attain)	TRAFFIC CONTROLS DURING CONGESTION	1.5 : 1 Extreme	10
	CLEAN FUELS REQUIREMENT FOR BOILERS		
<b>SEVERE</b> (15/17 years to attain)	PENALTY FEE PROGRAM FOR MAJOR SOURCES	1.3 : 1 Severe	25
	LOW VOC REFORMULATED GAS		
	VMT GROWTH OFFSET		
	VMT DEMONSTRATION (& TCMs IF NEEDED)		
<b>SERIOUS</b> (9 years to attain)	NSR REQUIREMENTS FOR EXISTING SOURCE MODS	1.2 : 1 Serious	50
	ENHANCED I/M		
	CLEAN FUELS PROGRAM (IF APPLICABLE)		
	MODELED DEMO OF ATTAINMENT		
	MILESTONE CONTINGENCY MEASURES FOR RFP		
	18% RFP OVER 6 YEARS		
<b>MODERATE</b> (6 years to attain)	ENHANCED MONITORING PLAN	1.15 : 1 Moderate	100
	BASIC I/M		
	CONTINGENCY MEASURES FOR FAILURE TO ATTAIN		
<b>MARGINAL</b> (3 years to attain)	15% RFP OVER 6 YEARS	1.1 : 1 Marginal	100
	MAJOR SOURCE VOC/NO <sub>x</sub> RACT		
	ATTAINMENT DEMONSTRATION		
	TRANSPORTATION CONFORMITY DEMONSTRATION		
	NEW SOURCE REVIEW PROGRAM		
	BASELINE EMISSION INVENTORY (EI)		
		PERIODIC EMISSION INVENTORY UPDATES	
		MAJOR SOURCE EMISSION STATEMENTS	

# More Information Regarding Nonattainment New Source Review (NSR) Permitting

- In nonattainment areas, new sources and major modifications are subject to emission offsets and **Lowest Achievable Emission Rate (LAER)** controls which can not consider costs when determining control.
- In attainment areas, new sources and major modifications are only subject to **Prevention of Significant Deterioration (PSD)** permitting which includes **Best Available Control Technology (BACT)** controls instead of LAER controls and no emission offsets. BACT controls can consider economic feasibility.

# Contact Information

## **Grant Hetherington**

Air Monitoring Data Manager

Phone: (608) 266-1552

E-mail: [Grant.Hetherington@wi.gov](mailto:Grant.Hetherington@wi.gov)

## **Joseph Hoch**

Regional Pollutants and Mobile Source Section Chief

Phone: (608) 267-7543

E-mail: [Joseph.Hoch@wi.gov](mailto:Joseph.Hoch@wi.gov)

