

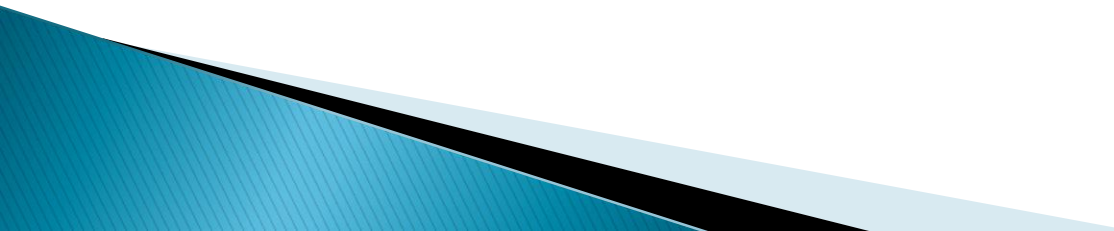
# Madison and Dane County Environmental Health Report Card 2010



**Public Health**  
MADISON & DANE COUNTY

*Healthy people and places*

# Introduction

- ▶ Data collected from multiple sources
    - ❖ Including public health professionals and agencies throughout County, State, and Federal levels
  - ▶ Comparisons to:
    - ❖ National and state health promotion agendas
    - ❖ Existing State and Federal standards
    - ❖ Other communities
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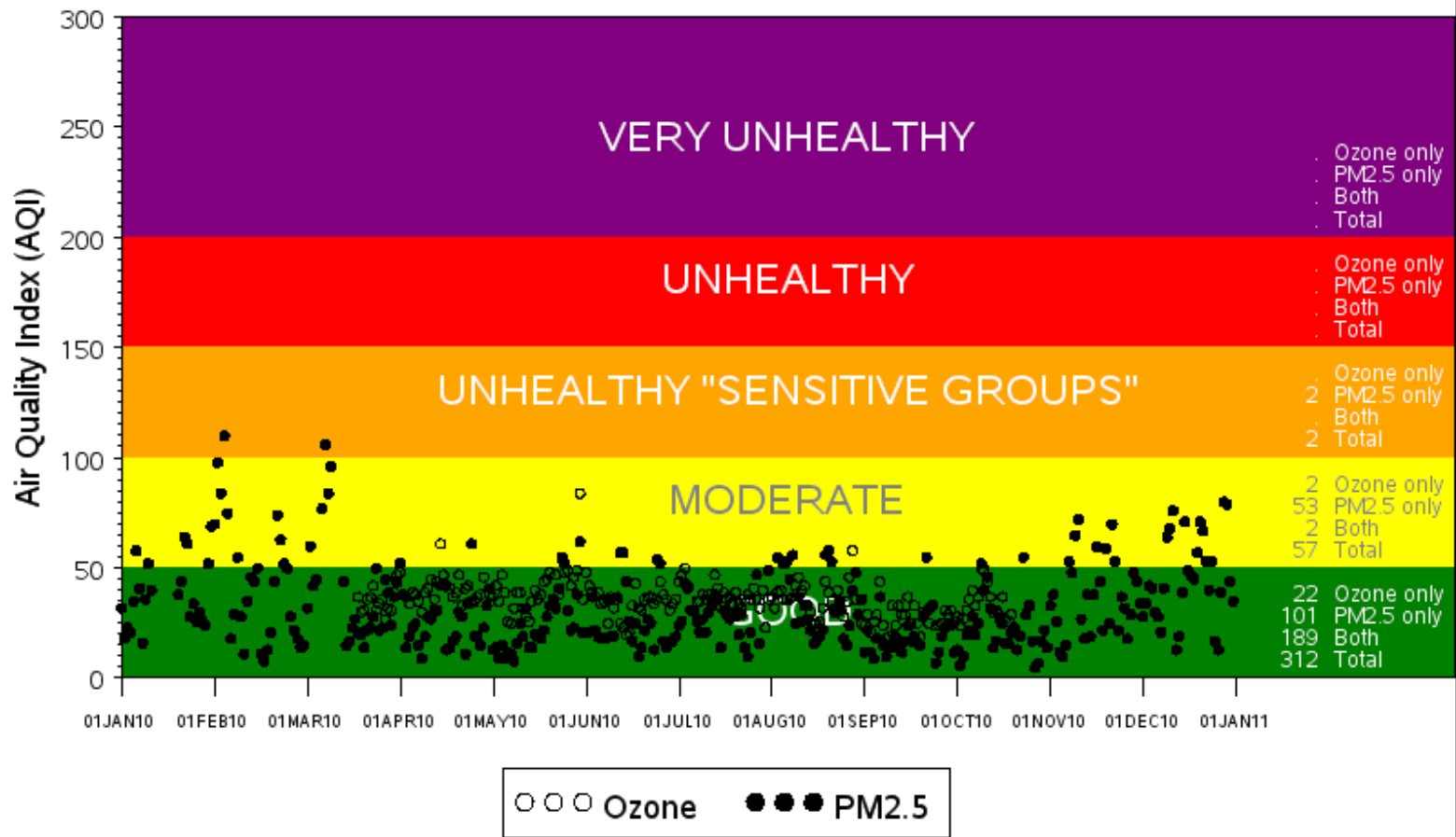
# Data and Grading System

- ▶ Inclusion of new datasets, potential areas of concern, and emerging issues
- ▶ Continued the use of the Arrow Grading system started in the last edition
  - ❖ The grading system demonstrates progress and areas that need improvement overall and comparison with last edition of this report
- ▶ Continued to refine the section evaluating the sustainability of Madison and Dane County environmental resources

# Air Quality – Summary

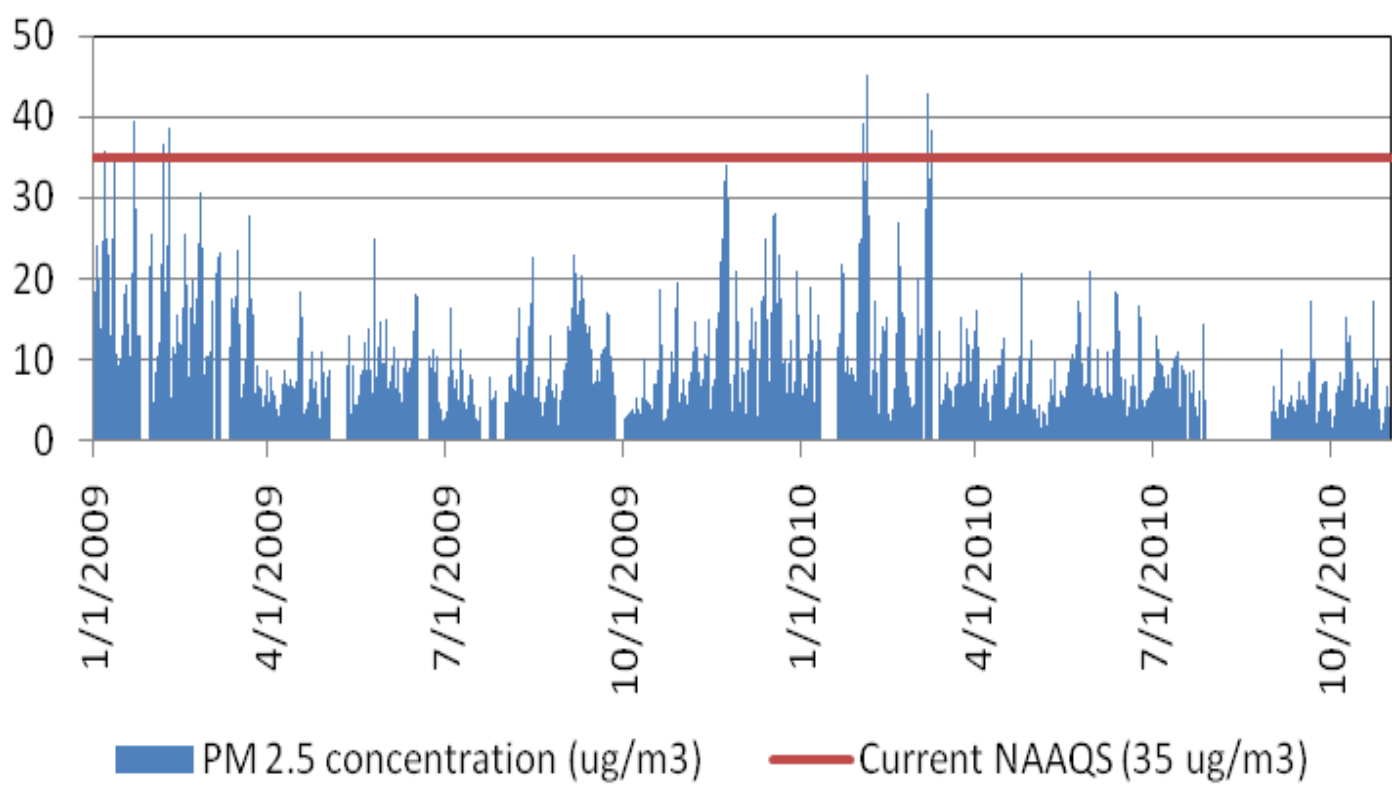
- ▶ Good News:
  - ❖ There were zero days in 2009 and 2010 that exceeded the current federal and state standards for Ozone
  - ❖ Continued reduction in reported air toxics from industry
  - ❖ Consistently good air quality during 2009 – 2010
- ▶ Bad News:
  - ❖ Days still occur with unhealthy quality for sensitive populations; mainly driven by PM 2.5
  - ❖ Asthma-related hospitalizations have increased but still meets the Healthiest Wisconsin 2010 objective
  - ❖ Cars and trucks greatly contribute to air quality problems and the levels of overall traffic volumes have increased.

# Daily Ozone and PM2.5 AQI Values in 2010 Dane County, WI



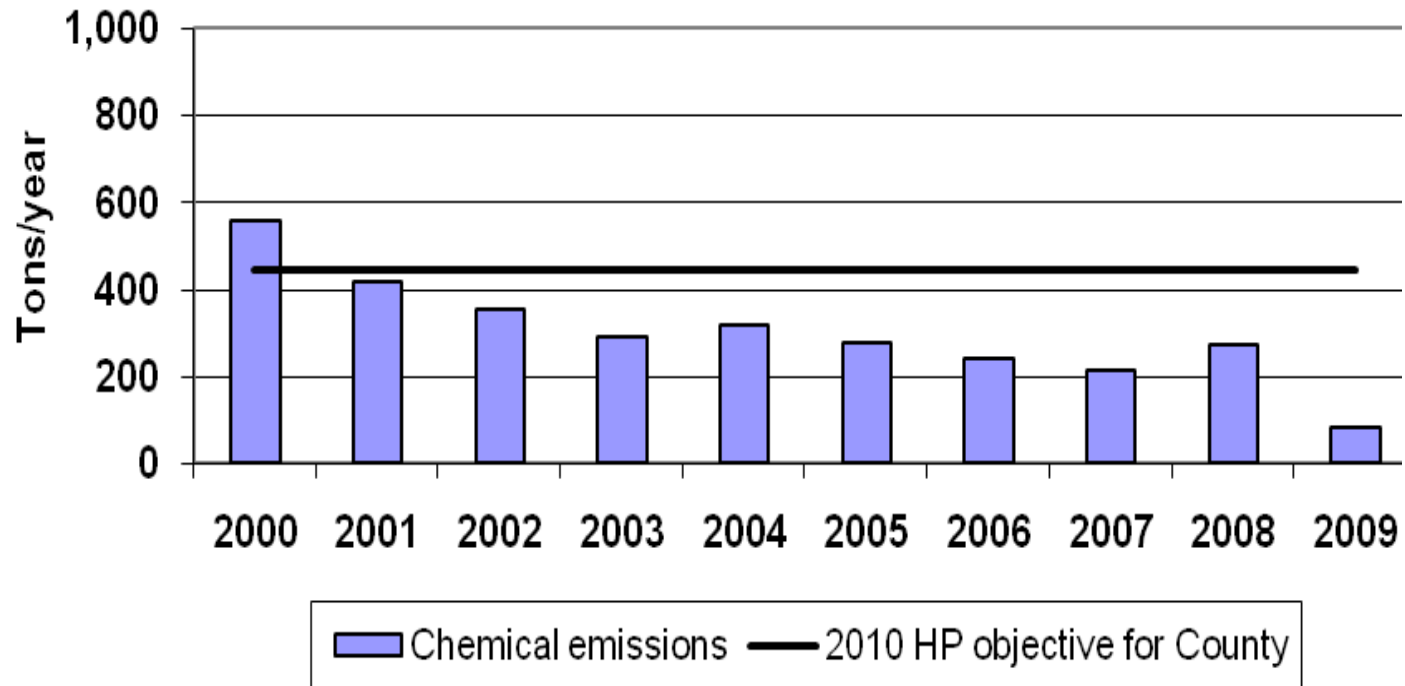
Source: EPA's Air Explorer (<http://www.epa.gov/airexplorer/>)  
Generated on: 13JUL11

## Maximum Daily Fine Particulate Matter Concentration - Dane County



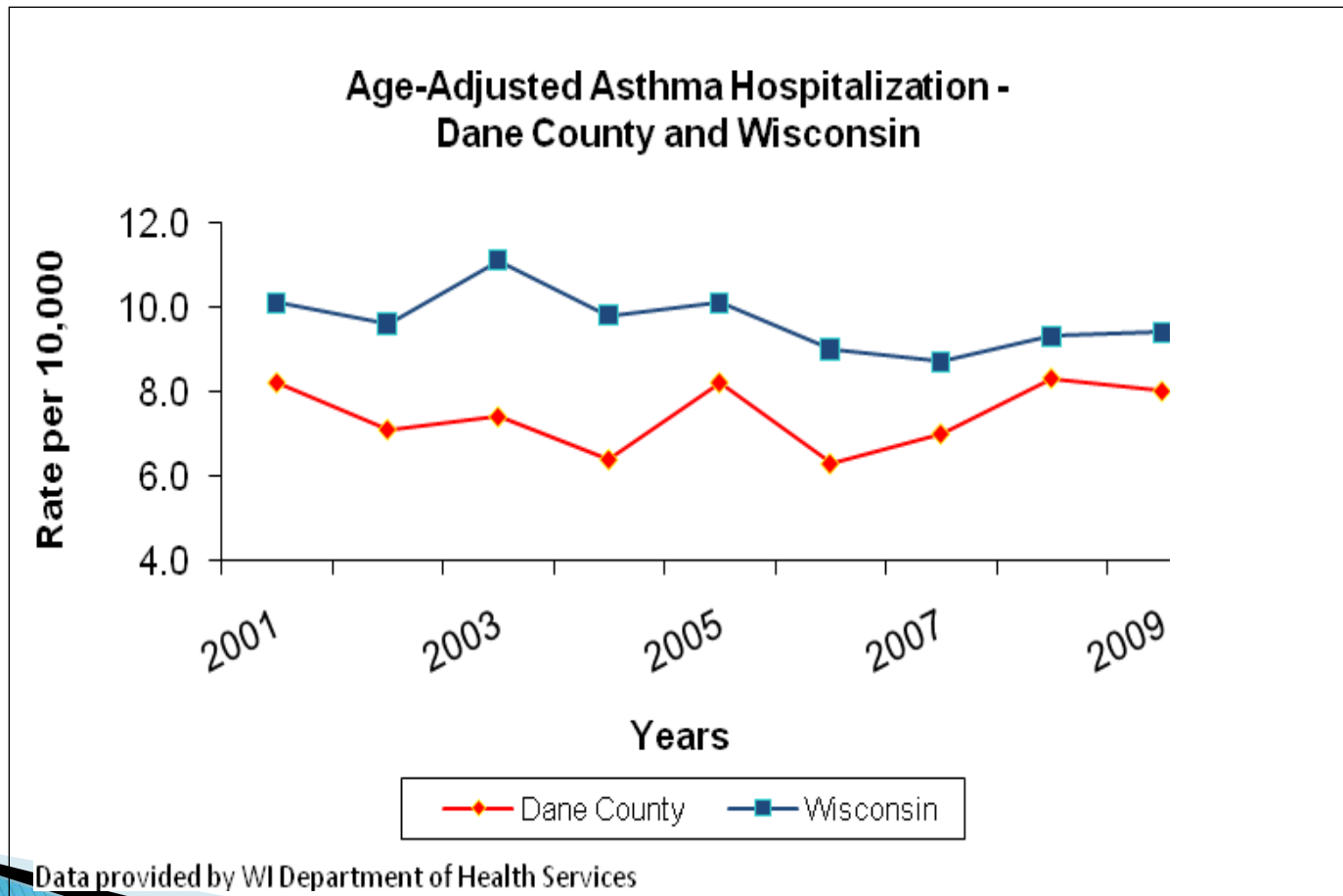
Data provided by WI Department of Natural Resources

## Emissions of Air Toxics by Dane County Industries



Data provided by US Environmental Protection Agency

- ❖ Exposure to air pollution (indoor and outdoor) can trigger and/or exacerbate asthma symptoms.
- ❖ A potential causative role that pollution may play in the initiation of asthma is still under investigation






# Air Quality – Example of Individual and Community Actions

## ▶ Individual Actions

- ❖ Whenever possible walk, bus, bike, carpool, and/or use mass transit systems
- ❖ Purchase energy efficient products such as appliances, electronics, etc. (ex: Energy Star approved)
- ❖ Purchase renewable energy from providers

## ▶ Community Actions

- ❖ Support, promote, and improve mass transit systems and other alternate modes of transportation
  - ❖ Continue to develop alternative energy sources
  - ❖ Monitor air quality and develop initiatives to decrease emissions
- 

# Water Quality – Summary

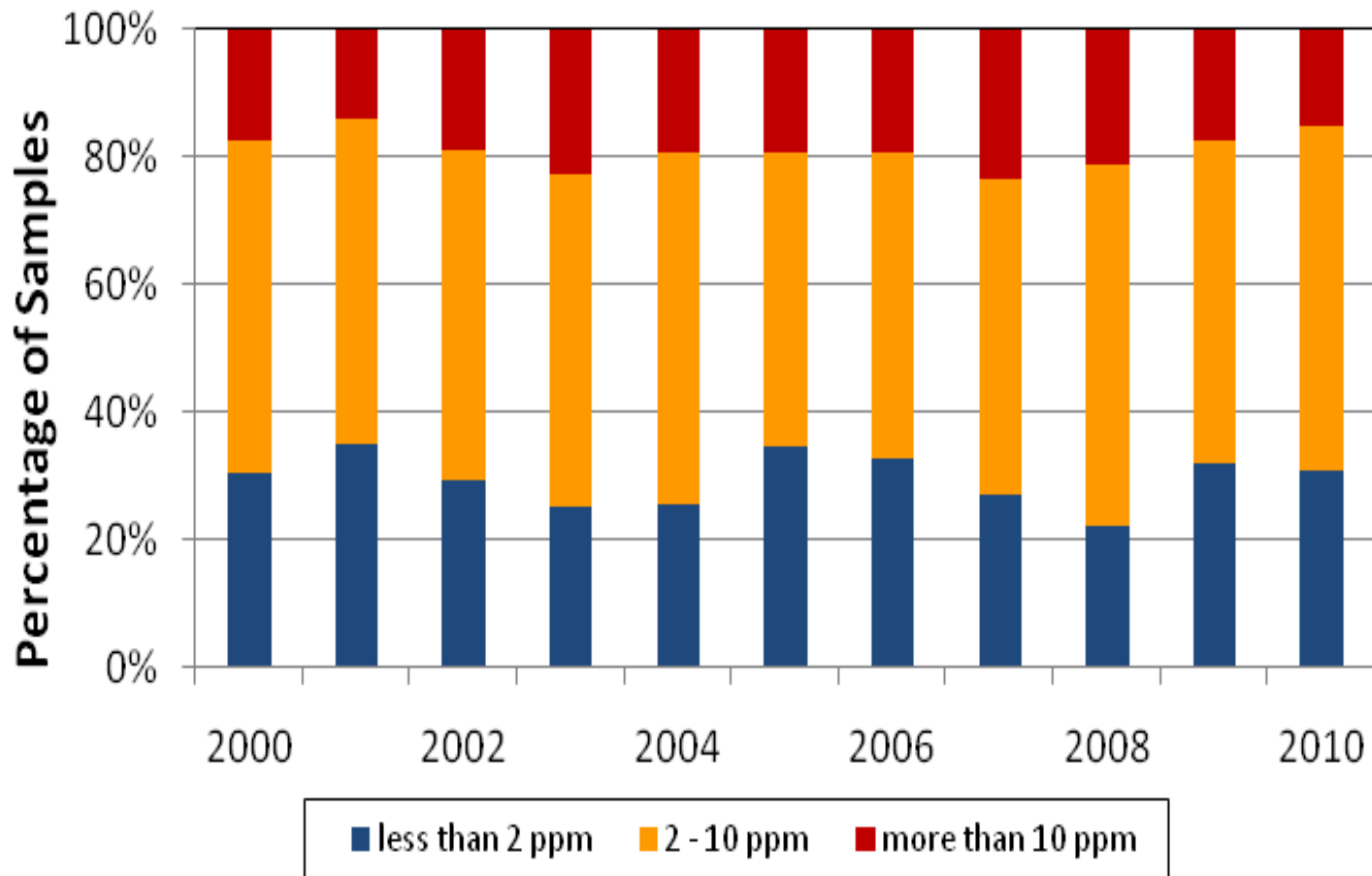
## ▶ Good News:

- ❖ Low manganese concentrations found in most Madison homes
- ❖ Waterborne illness rarely occurs in Dane County

## ▶ Bad News:

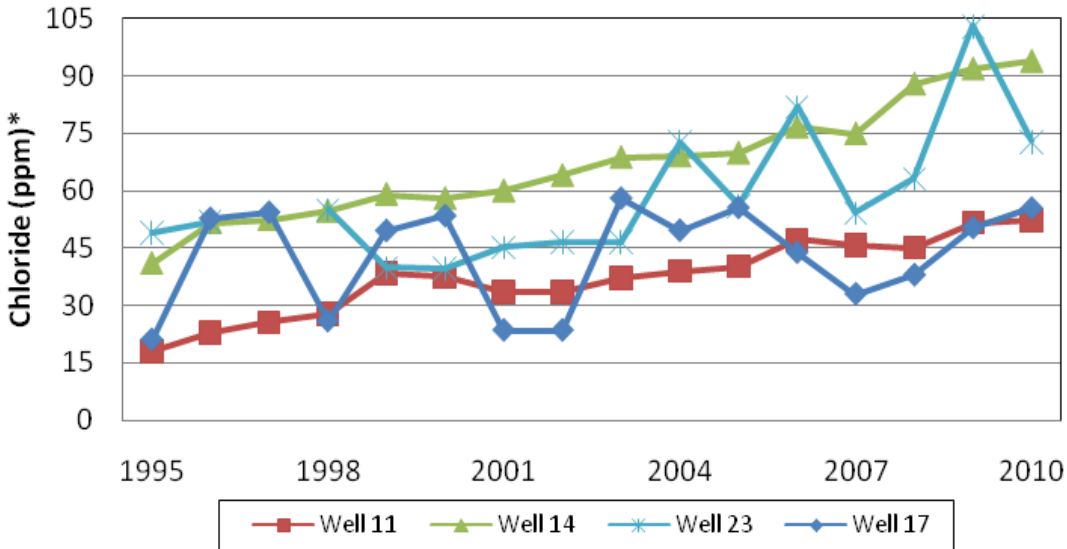
- ❖ Nitrate levels high in some Dane County homes and private wells tested infrequently
- ❖ Chloride levels increasing in municipal wells and surface waters
- ❖ Algae and bacteria causing problems in lakes and leading to beach closures

## Results of Nitrate Testing in Private Wells, Dane County



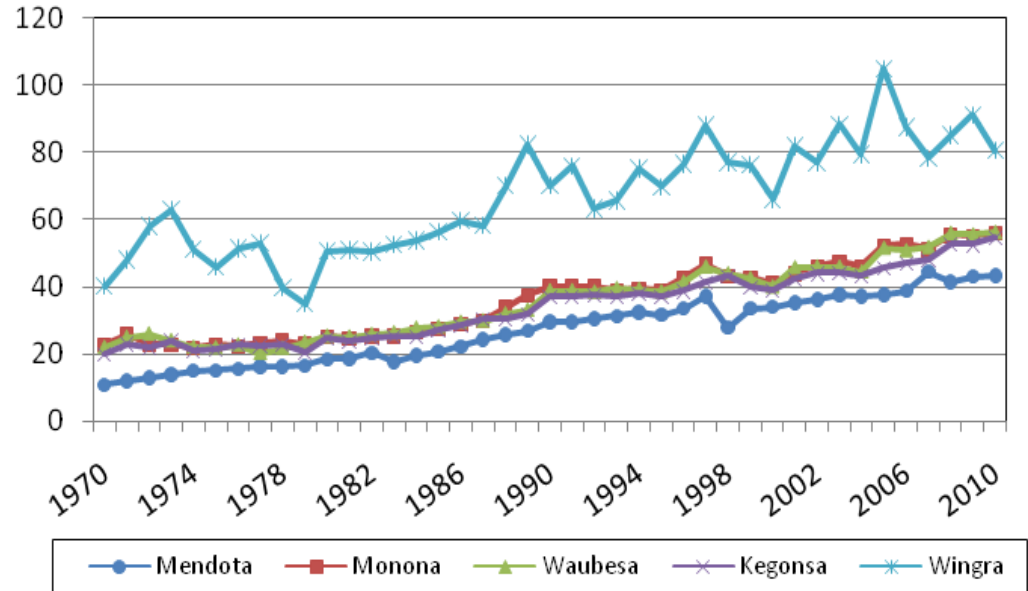
Data provided by WI Department of Natural Resources

### Chloride Levels in Select Madison Wells

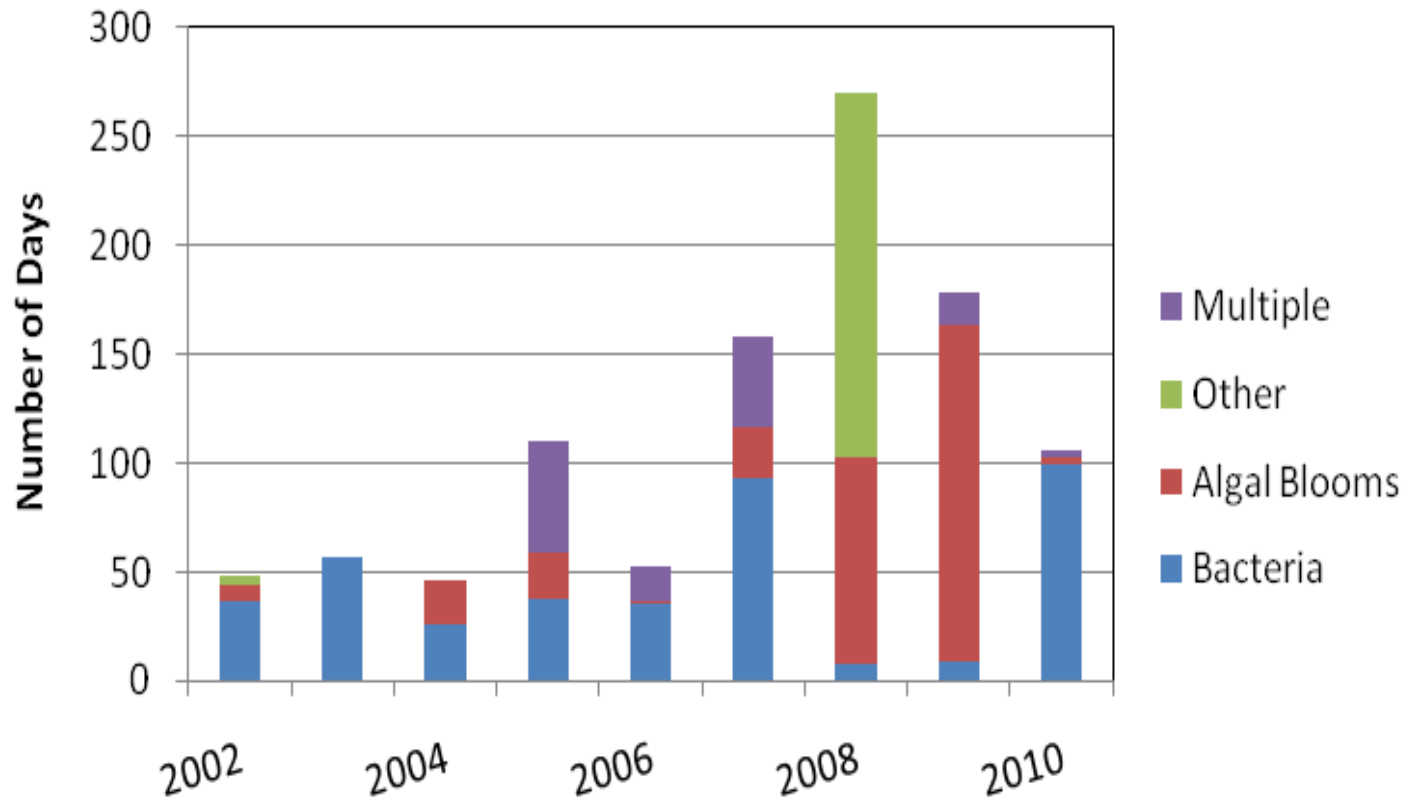


Data provided by Public Health - Madison Dane County  
 \*Breaks in the trend line indicates missing data

### Dane County Lake Chloride Levels



## Dane County Beach Closures due to Water Quality Issues

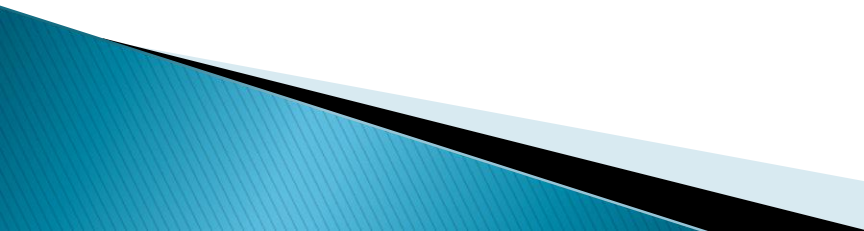


Data provided by Public Health - Madison and Dane County

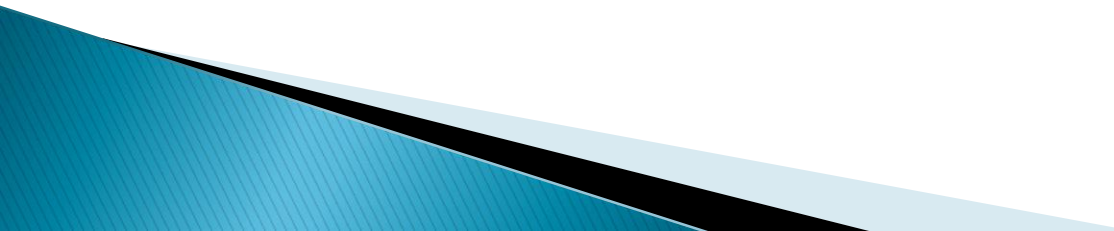
# Water Quality – Human Health

- ▶ Recreational water use
  - ❖ Four cases of illness related to harmful algal blooms were reported in 2009; four additional cases reported in 2010.
  - ❖ Over consumption of contaminated fish may increase the risk of chronic health conditions including cancer and neurological effects.
    - Fish consumption advisories are available from both the WI DNR and PHMDC

# Water Quality – Individual Actions

- ▶ Know your water quality
    - ❖ Private wells: annual testing for nitrate and bacteria
    - ❖ Public wells: Consumer Confidence Report
  - ▶ Reduce or eliminate use of chemicals and lawn care products on property
    - ❖ Salt for melting ice, pesticides, and fertilizer should be used judiciously
  - ▶ Keep yard waste and leaves out of street gutters
  - ▶ Oils, solvents, and cleaning chemicals should be disposed of properly.
  - ▶ Know and follow fish consumption guidance
- 

# Water Quality – Community Actions

- ▶ Monitor surface water sources and public drinking water supplies to ensure water quality
  - ▶ Update fish advisories (as necessary) to reflect changes in levels of pollutants and/or federal regulatory standards.
  - ▶ Reduce salt use on Dane County roadways, parking lots, and sidewalks.
  - ▶ Take necessary actions to reduce water quality problems in a timely manner.
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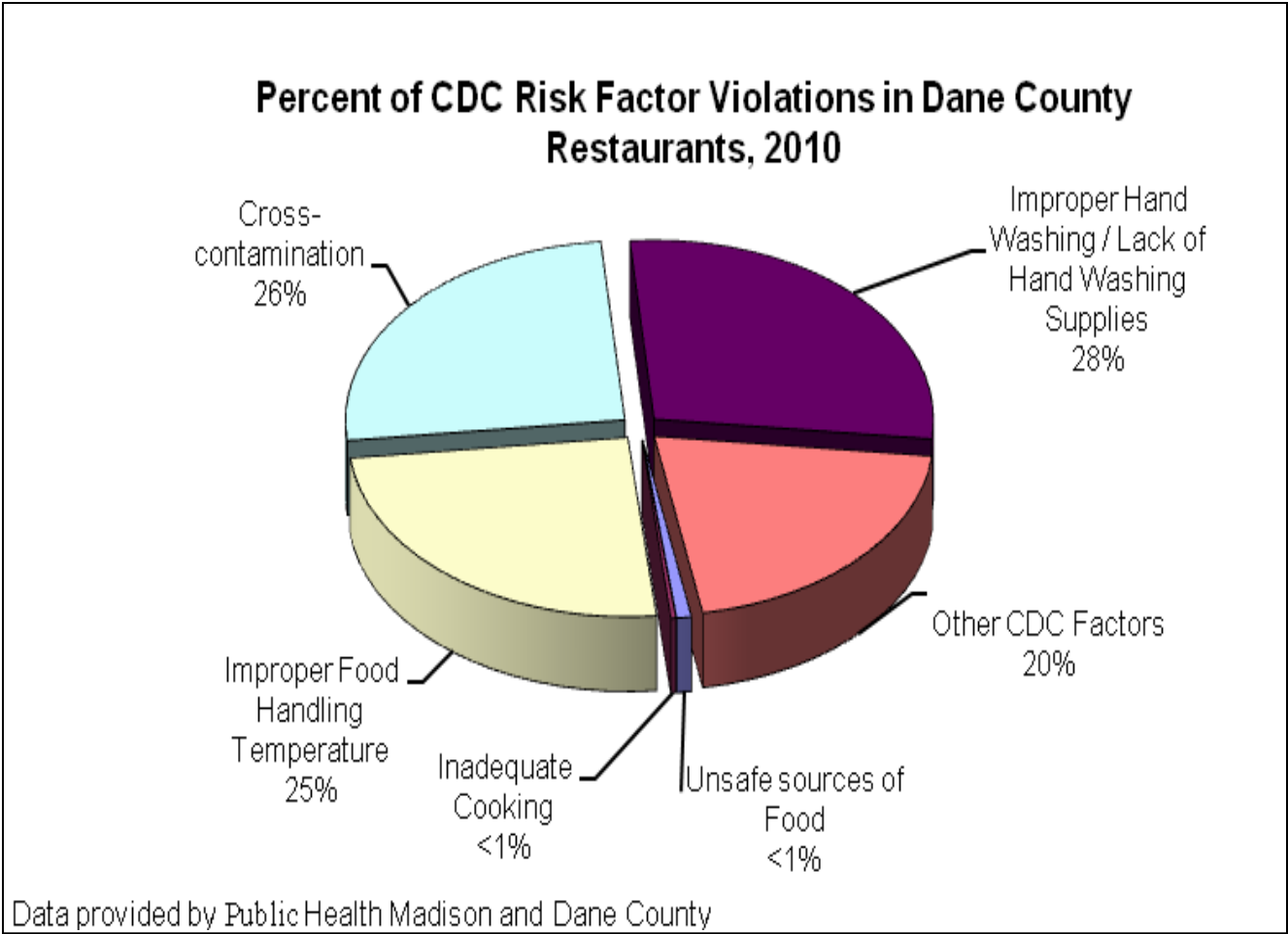


# Food Protection – Summary

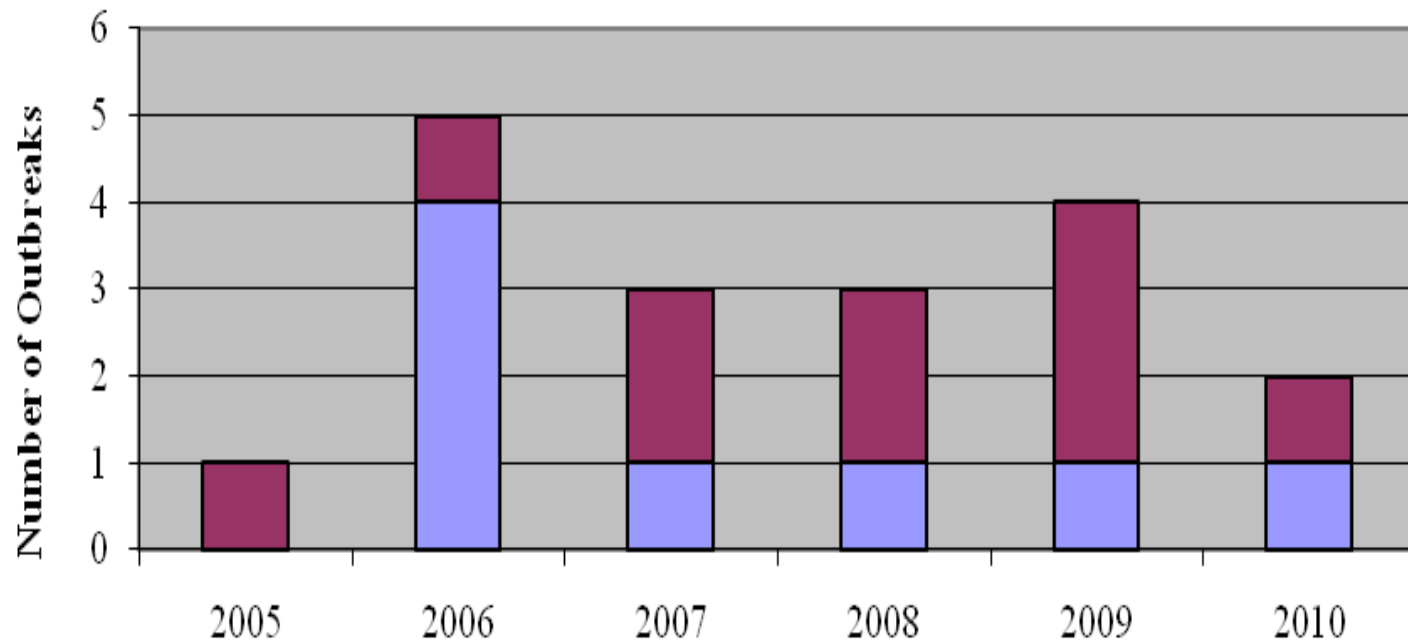
- ▶ Good News:
  - ❖ Many high quality places to eat
  - ❖ Few foodborne outbreaks in 2009 and 2010 that led to multiple cases
- ▶ Bad News:
  - ❖ Problems that may lead to illness continue to persist in local restaurants and food vendors
    - Examples: Improper food handling and ill workers

❖ The 3 most common violations in 2009 and 2010 were:

- 1.) Inadequate hand washing
- 2.) Improper food handling temperature
- 3.) Cross-contamination



## Number of Foodborne Outbreaks in Dane County Food Establishments



Data provided by Public Health Madison and Dane County


■ Ill worker ■ Other

# Food Protection – Individual and Community Action

## ▶ Individual Actions

- ❖ Wash your hands
- ❖ Keep cold food cold and hot food hot
- ❖ Keep the fridge at or below 40°F
- ❖ Report illnesses and concerns to Public Health

## ▶ Community Actions

- ❖ Inspect food establishments
  - ❖ Investigate potential outbreaks
  - ❖ Educate food service workers
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# Healthy Homes & Communities – Summary

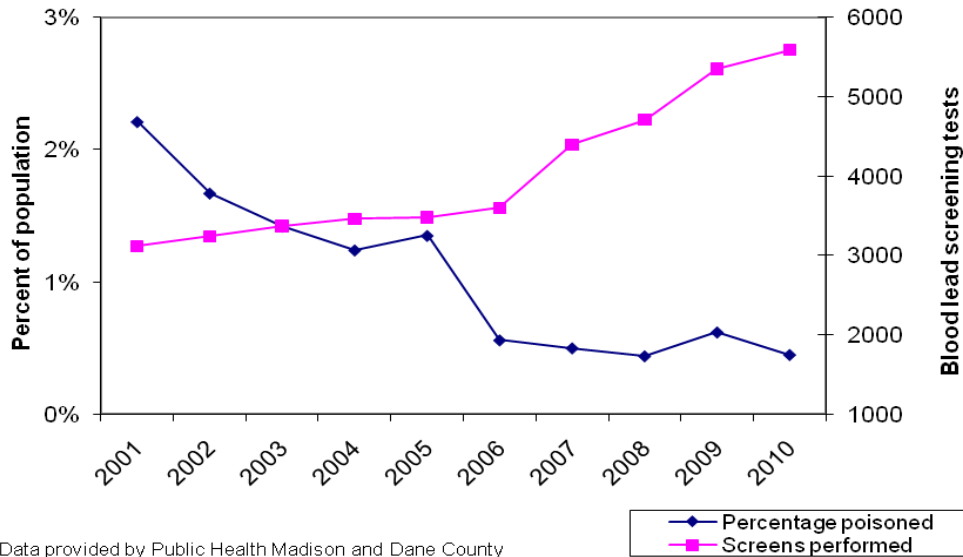
## ▶ Good news

- ❖ Low number of childhood lead poisoning cases in the City of Madison and Dane County
- ❖ Dane County and the State of Wisconsin have passed smoking bans that prohibit smoking in all workplaces (including bars and restaurants)
  - Dane County ban took effect August 2009
  - Statewide ban took effect in July of 2010

## ▶ Bad news

- ❖ Mold remains an issue in many Dane County homes; nearly 20% of all health complaints to PHMDC are mold related.
- ❖ Approximately 40% of homes with a reported radon test were higher than the US EPA guideline of 4 picocuries of radon per liter of air (4 pCi/L).

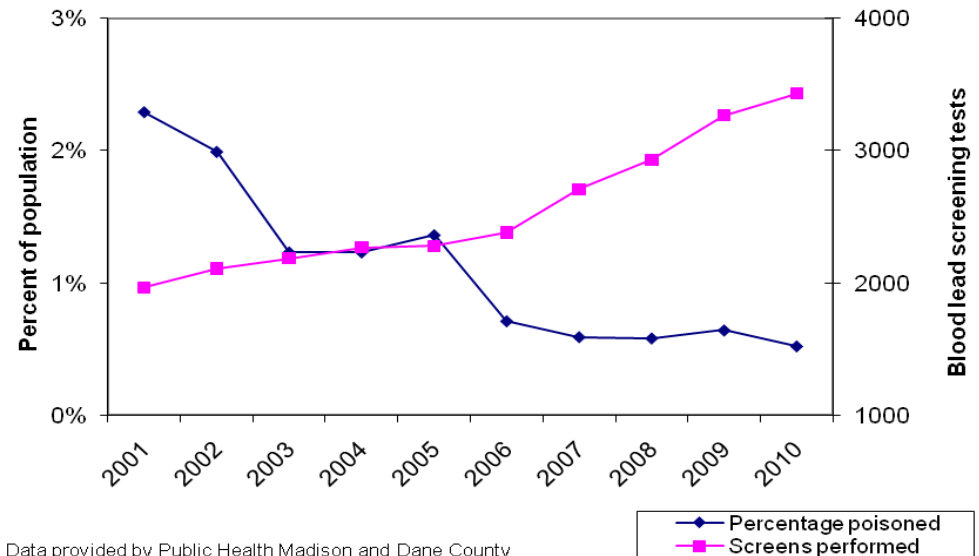
## Lead Poisoning in Dane County Among children 0-6 years old



### ❖ At both the City and County level:

- Number of reported childhood lead poisonings has consistently decreased.
- Number of children screened has continued to increase

## Lead Poisoning in the City of Madison Among children 0-6 years old



# Healthy Homes & Communities – Individual and Community Actions

## ▶ Individual Actions

- ❖ Test your home for lead and radon
- ❖ Take action if lead and/or radon levels are high
- ❖ Quit smoking or establish restrictive policies in your home and automobile to reduce exposure to second hand smoke

## ▶ Community Actions

- ❖ Continue to provide outreach services and/or low cost testing options for lead, radon, and mold
- ❖ Continue to enforce restrictive smoking policies established at the City, County, and State level

# Sustainability– Summary

## ▶ Good news

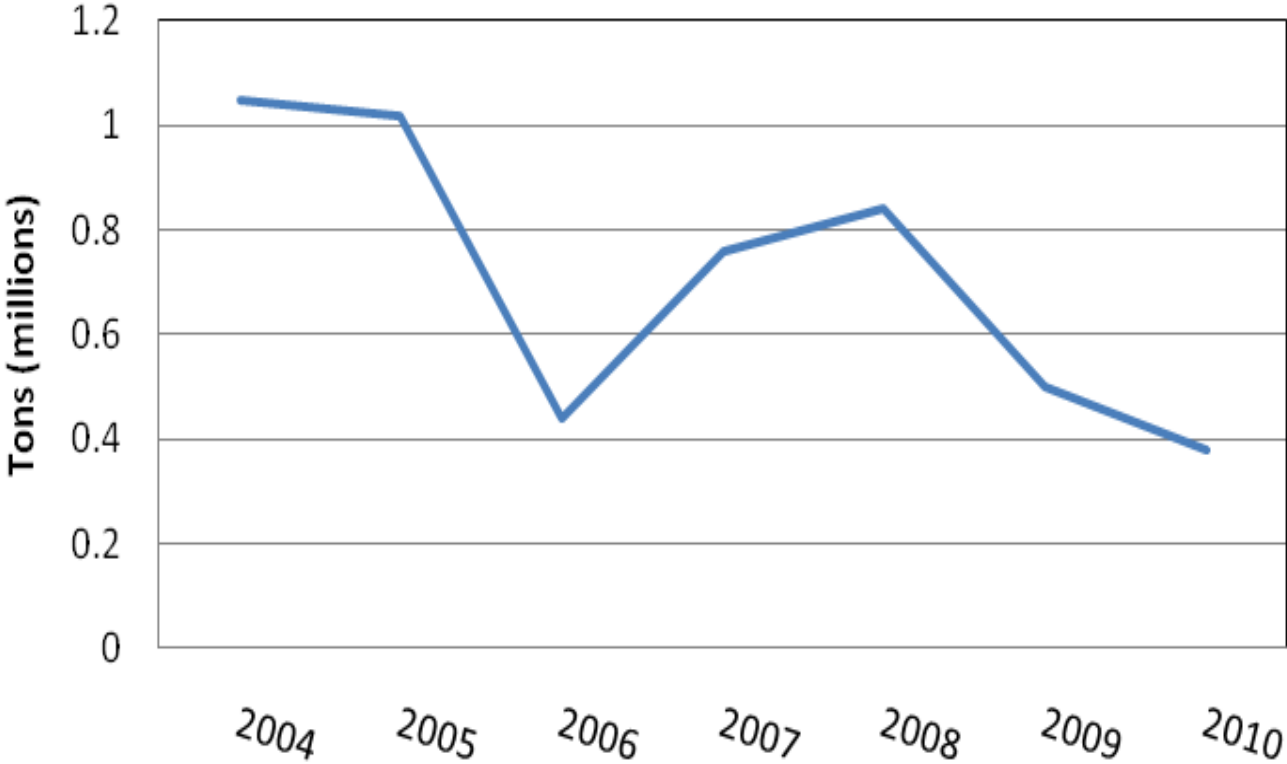
- ❖ Point source emissions of CO<sub>2</sub> continues to decrease
- ❖ The amount of recycled material per City of Madison resident has increased approximately 70% since 2001
- ❖ Annual per capita residential municipal water use has consistently decreased since 2005

## ▶ Bad news

- ❖ Data for mobile and area source emissions of CO<sub>2</sub> unavailable
- ❖ At county level, an approximate 13% increase in the amount of waste delivered to landfill
- ❖ Only 23% of annual waste is recycled at County level
- ❖ Draw downs in aquifer water levels reported

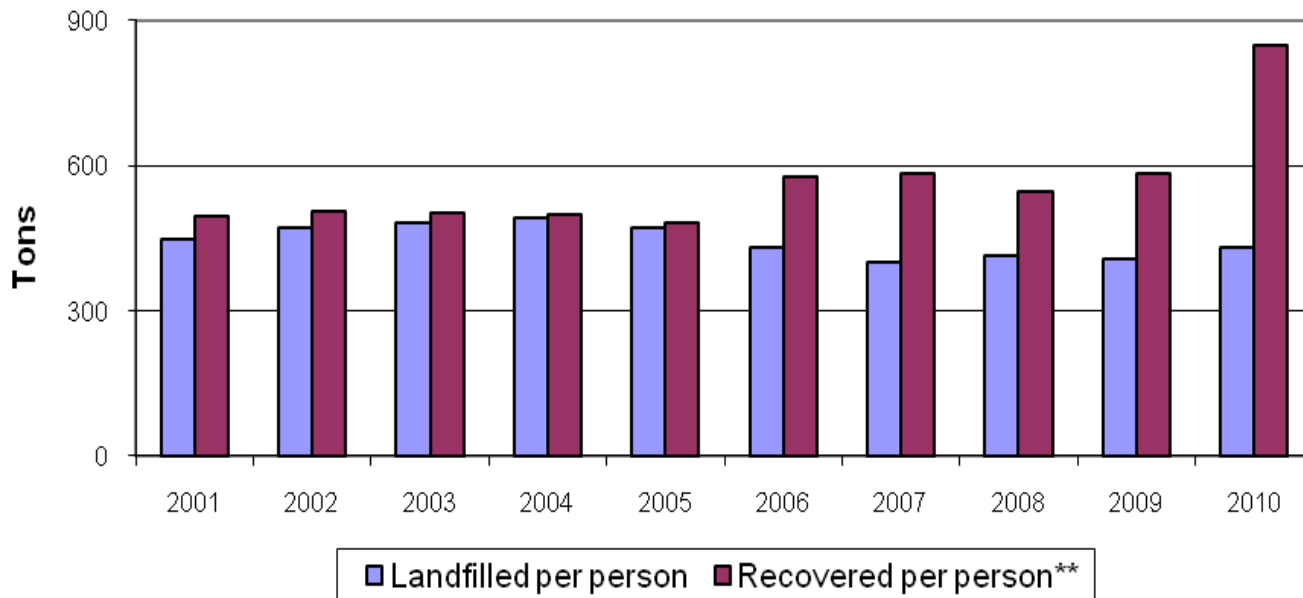


# CO<sub>2</sub> Emissions for Dane County



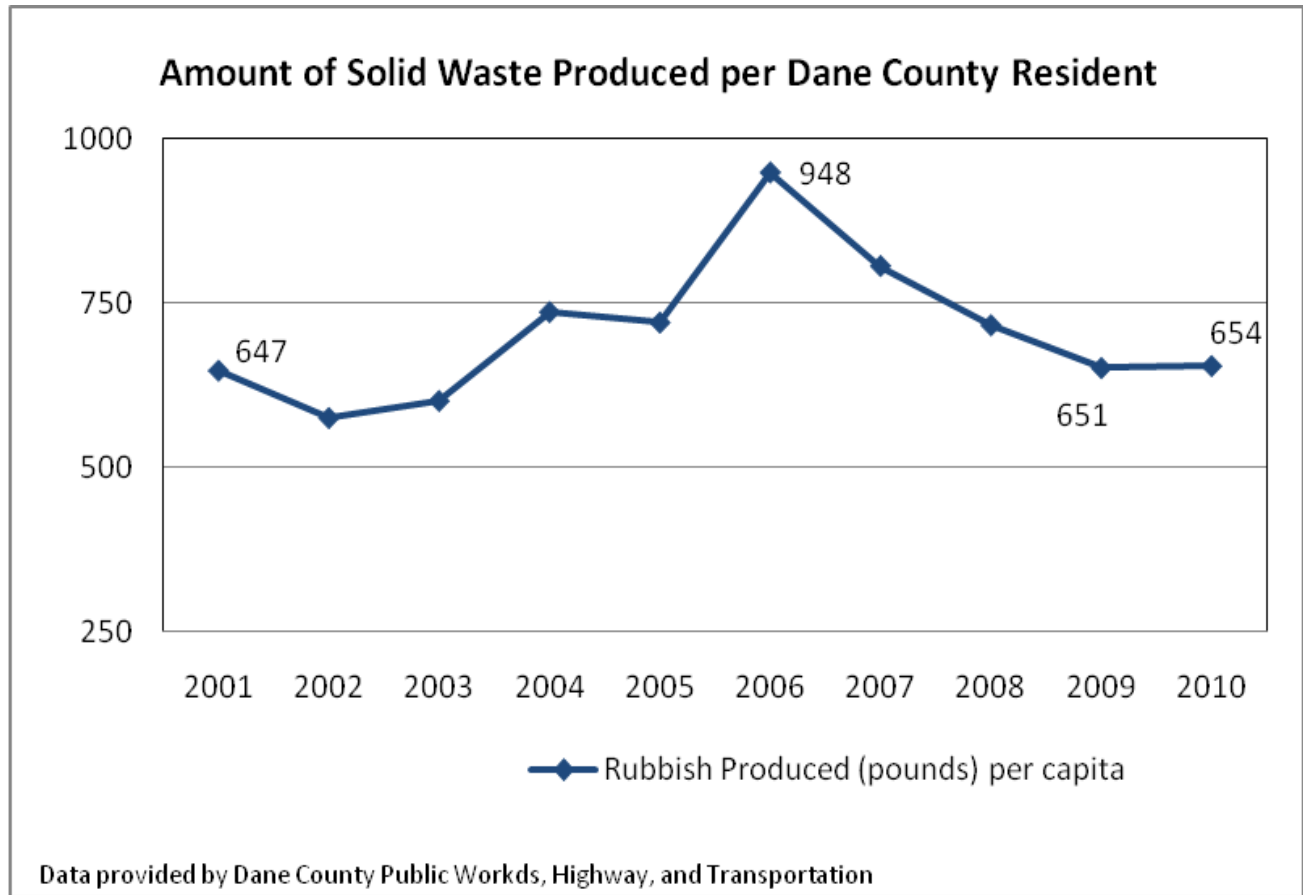
Data provided by Wisconsin Department of Natural Resources

### Amount of Solid Waste Produced per Madison Resident\*



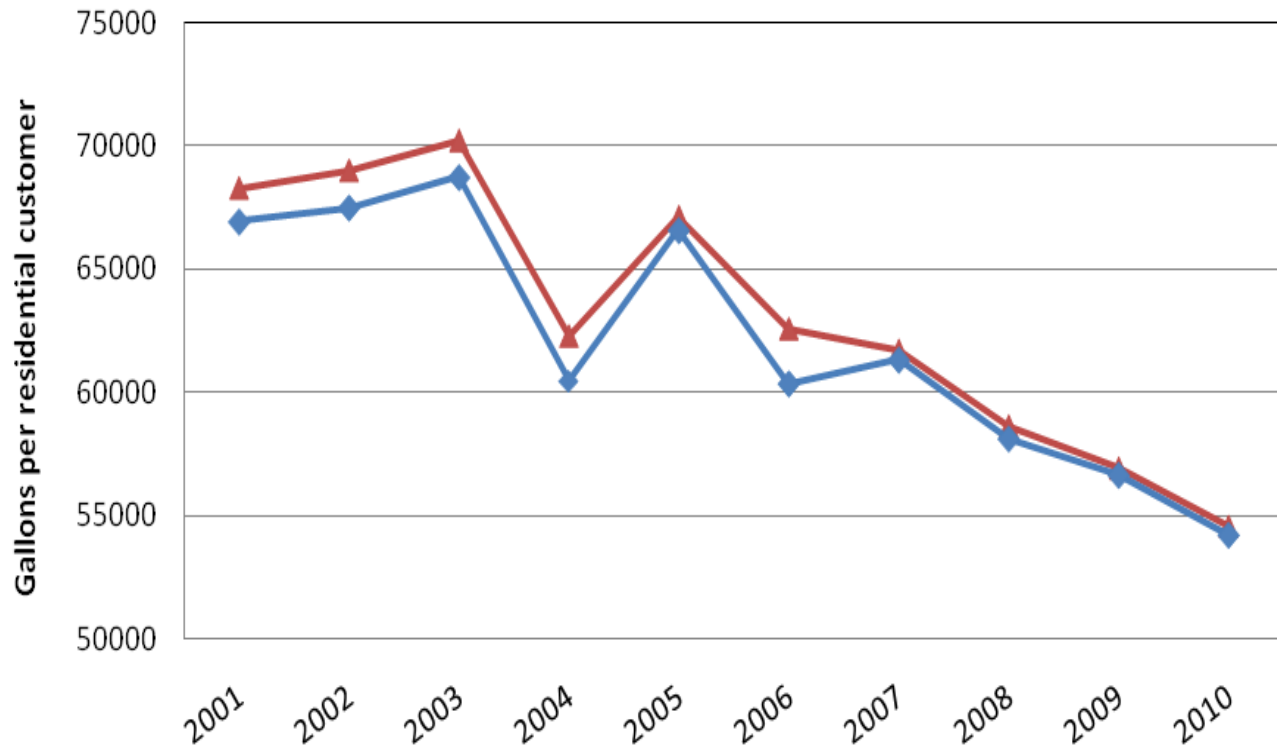
\* Includes solid waste collected by the City of Madison. Waste collected from businesses and large apartment complexes by private haulers is not included.

\*\* Accounts for waste that is recycled, composted, reused, or otherwise diverted from the landfill.



- ❖ At the county level, the amount of material deposited in the Dane County landfill has slightly increased over the past decade but has decreased steadily since 2006.
- ❖ Much of the recycling at the county level has been privatized and the data is no longer available for surveillance purposes.

### Dane County - Annual Residential Water Use\*



\* Includes only pumpage from municipal water utility wells.  
Data provided by the Public Service Commission of Wisconsin

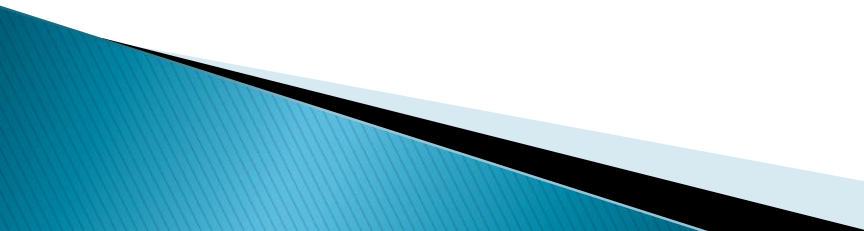
City of Madison      Dane County

# Sustainability – Individual and Community Actions

## ▶ Individual Actions

- ❖ Adjust individual behavior and lifestyle choices to reduce greenhouse gas emissions and water usage
- ❖ Increase individual recycling efforts and purchase products derived from recycled material
- ❖ Purchase electricity generated from renewable sources

## ▶ Community Actions

- ❖ Design and support programs to increase energy efficiency and water conservation
  - ❖ Provide and expand alternatives to land filling waste
  - ❖ Increase availability and promote the use of energy from renewable sources
- 



Thanks for your attention

Additional questions?