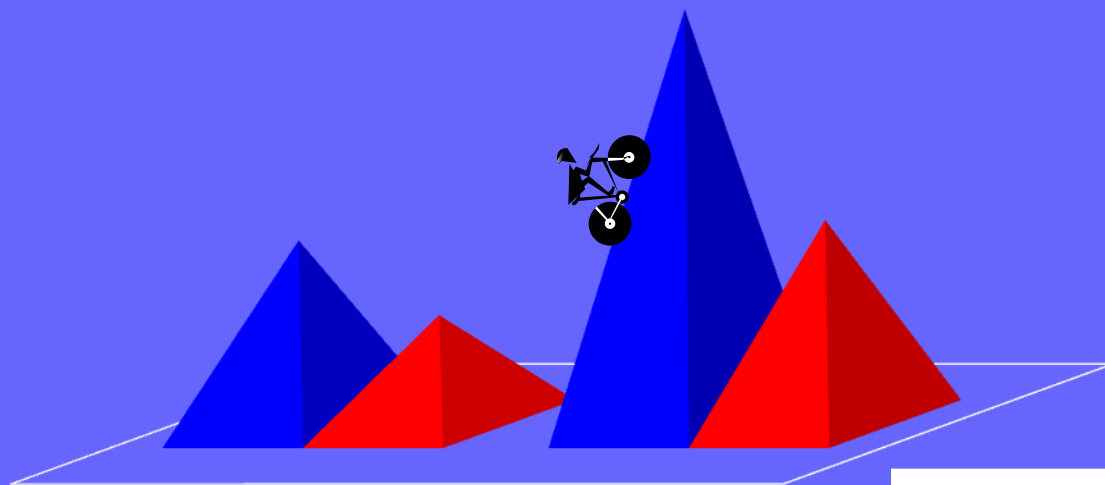


Madison and Dane County Environmental Health Report Card 2008



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

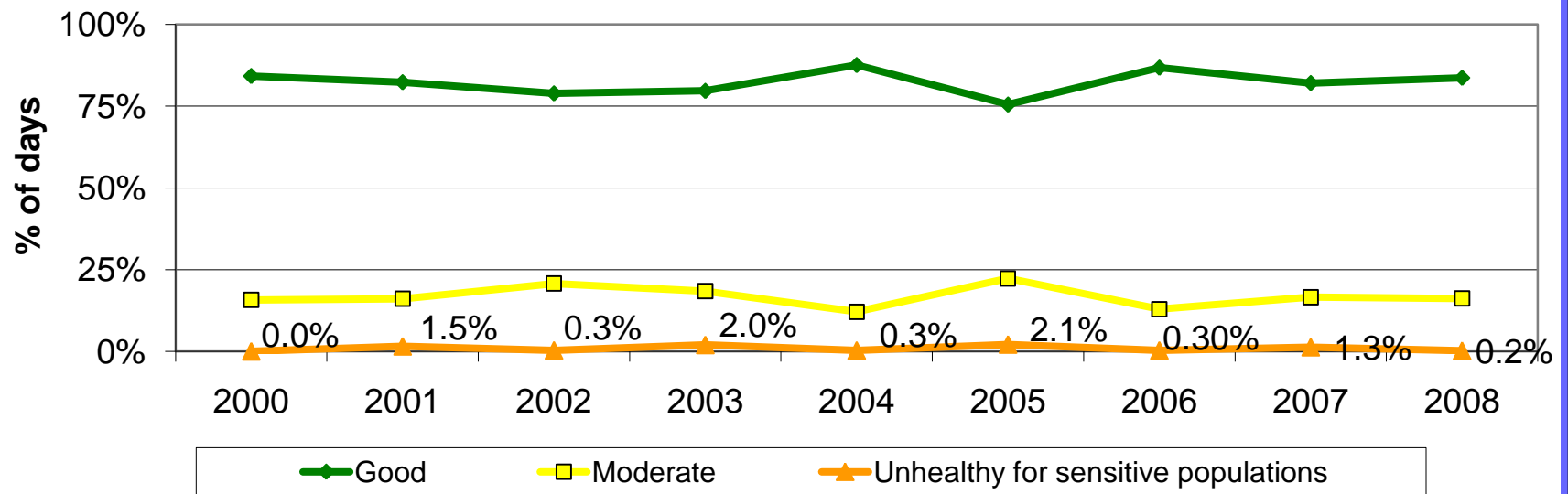
Changes From Previous Editions

- Inclusion of new datasets, potential areas of concern, and emerging issues
- Use of Arrow Grading system
 - ❖ Better demonstrate progress and areas that need improvement
- Inclusion of a section evaluating the sustainability of Madison and Dane County environmental resources

Air Quality – Summary

- **Good News:**
 - ❖ Updated US EPA standards for O₃ and PM 2.5
 - ❖ Continued reduction in reported air toxics from industry
 - ❖ Noted decreases in asthma prevalence and hospitalizations
 - ❖ Consistently good air quality during 2007 – 2008
- **Bad News:**
 - ❖ Days still occur with unhealthy quality for sensitive populations
 - ❖ Earned “F” from American Lung Association for O₃ and PM 2.5 concentrations
 - ❖ Cars and trucks greatly contribute to air quality problems

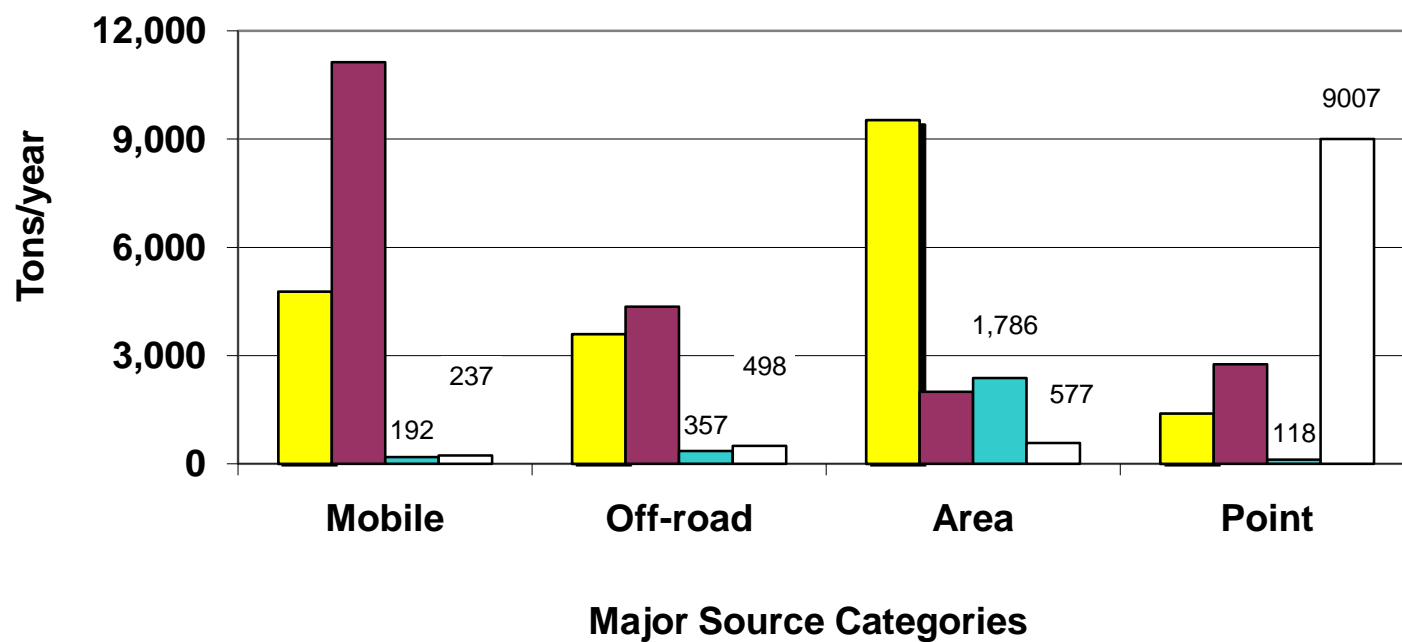
Air Quality Index (AQI) in Madison and Dane County*



* Dane County did not have any days with "unhealthy" or "very unhealthy" levels of ozone or fine particulate between 2000 and 2008

Data provided by WI Department of Natural Resources

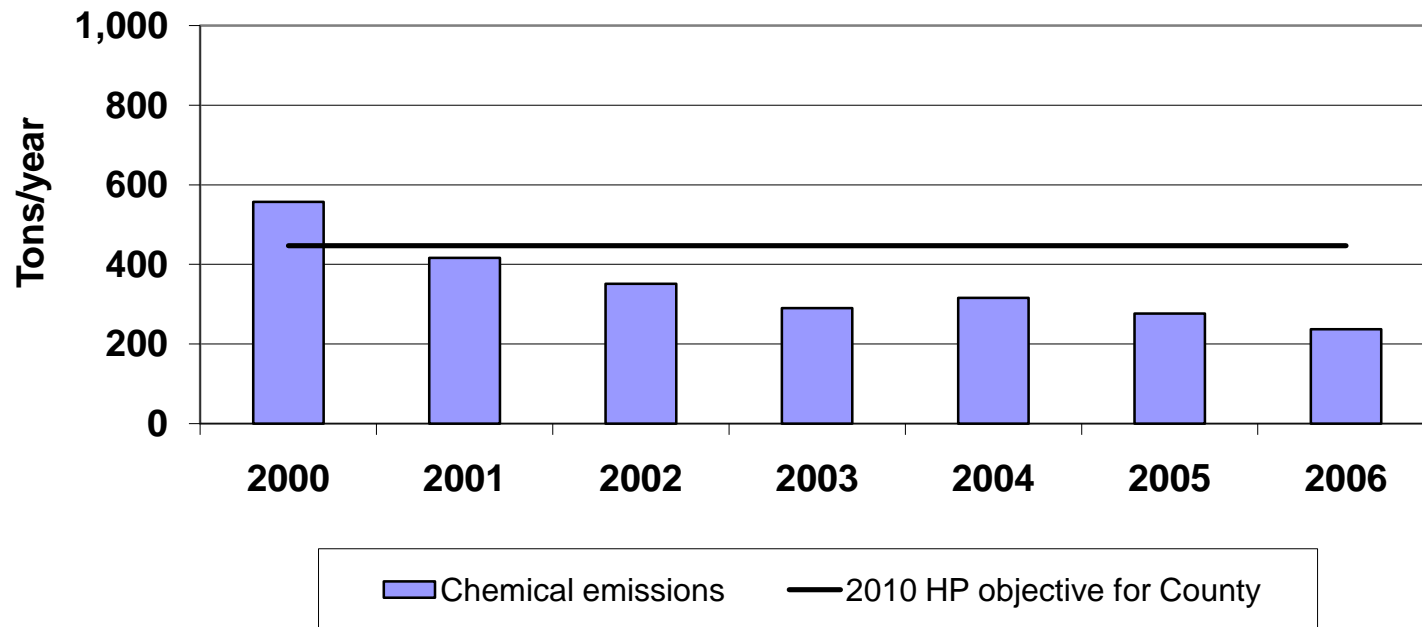
Dane County 2005 Emissions by Source



Data provided by WI Department of Natural Resources

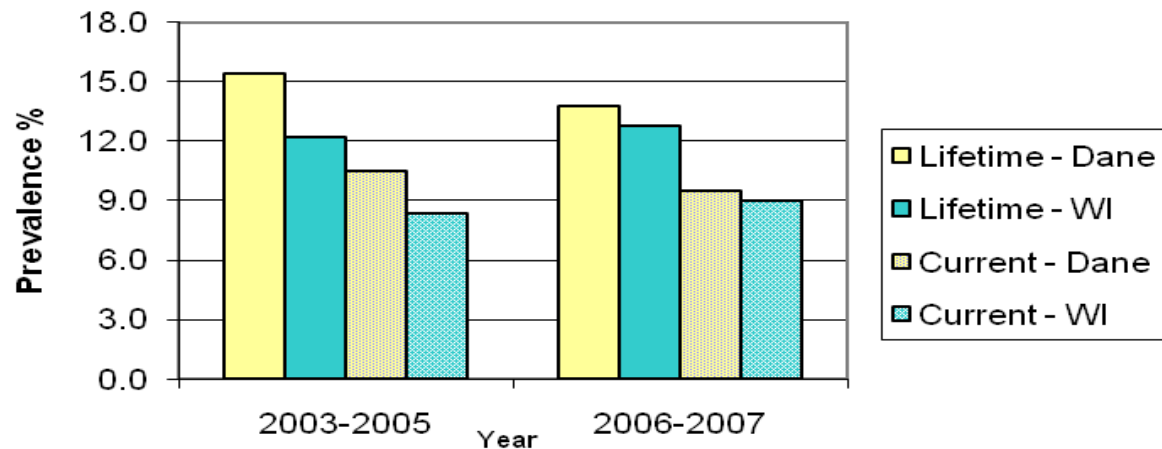
■ VOC ■ NOX ■ PM2.5 ■ SO2

Emissions of Air Toxics by Dane County Industries



Data provided by US Environmental Protection Agency

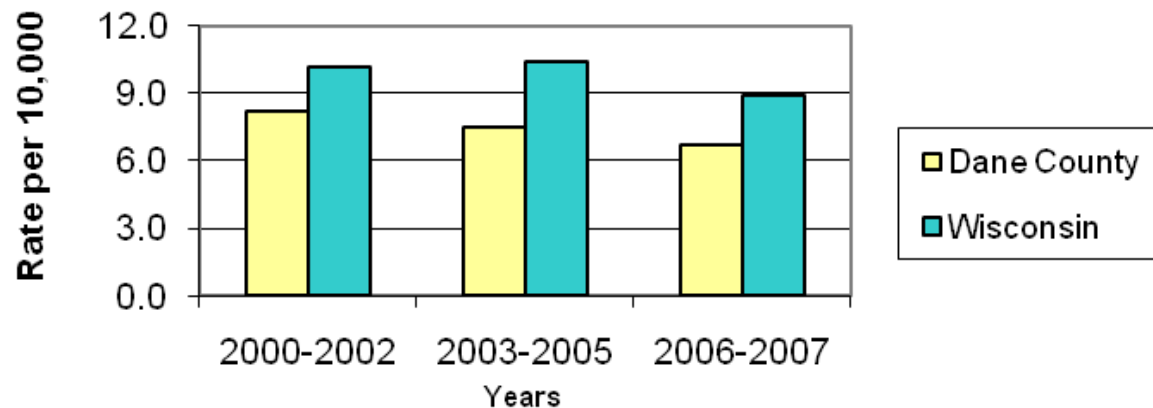
Lifetime and Current Asthma Prevalence



Data provided by WI Dept of Health and Family Services

❖ Consistent decreasing rates of asthma prevalence and hospitalizations

Age-Adjusted Asthma Hospitalization Rates per 10,000 Dane County and Wisconsin



Data provided by WI Dept of Health and Family Services

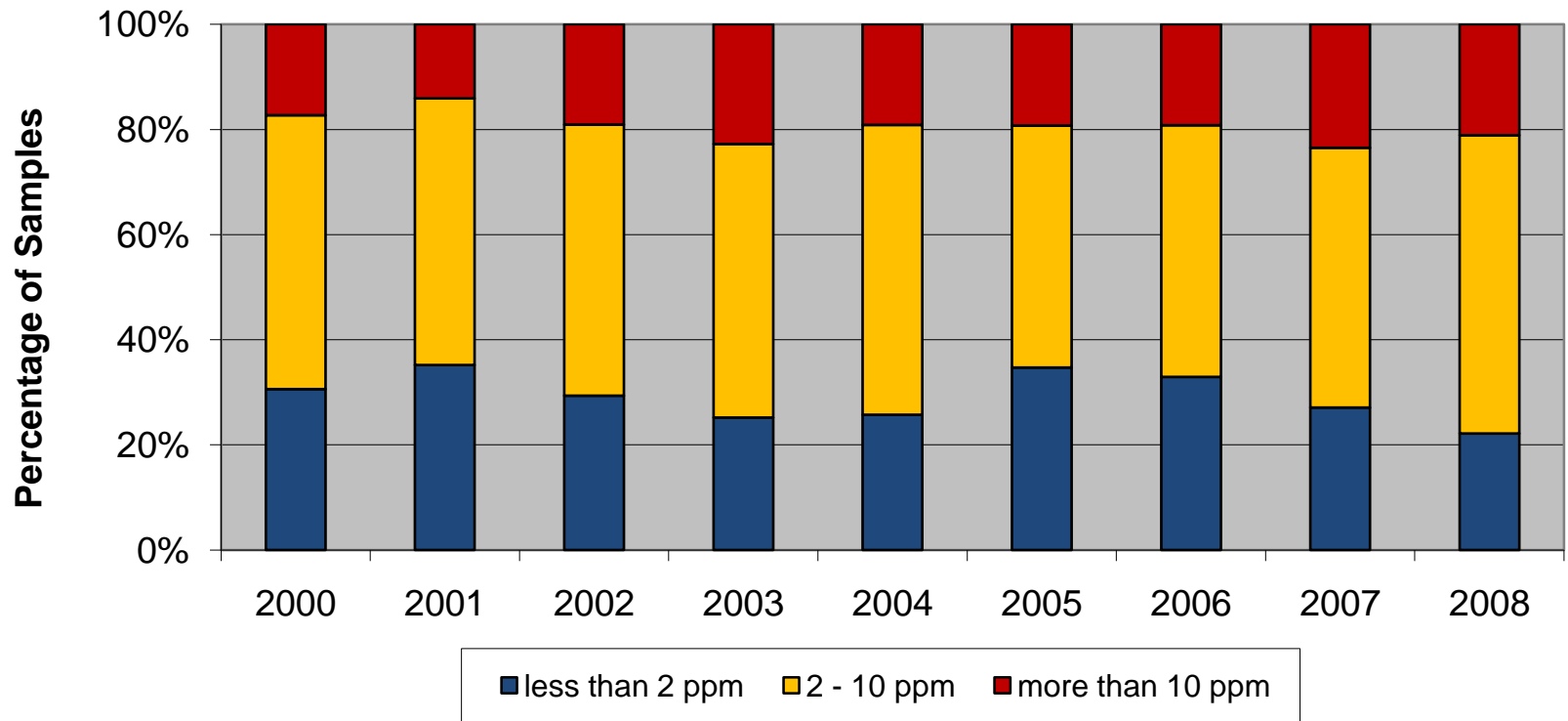
Air Quality – Individual and Community Actions

- Whenever possible walk, bus, bike, carpool, and/or use mass transit systems
 - ❖ EnAct Team members eliminated >350,000 vehicle miles
 - ❖ Madison Metro ridership increased 6% in 2008
 - ❖ 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

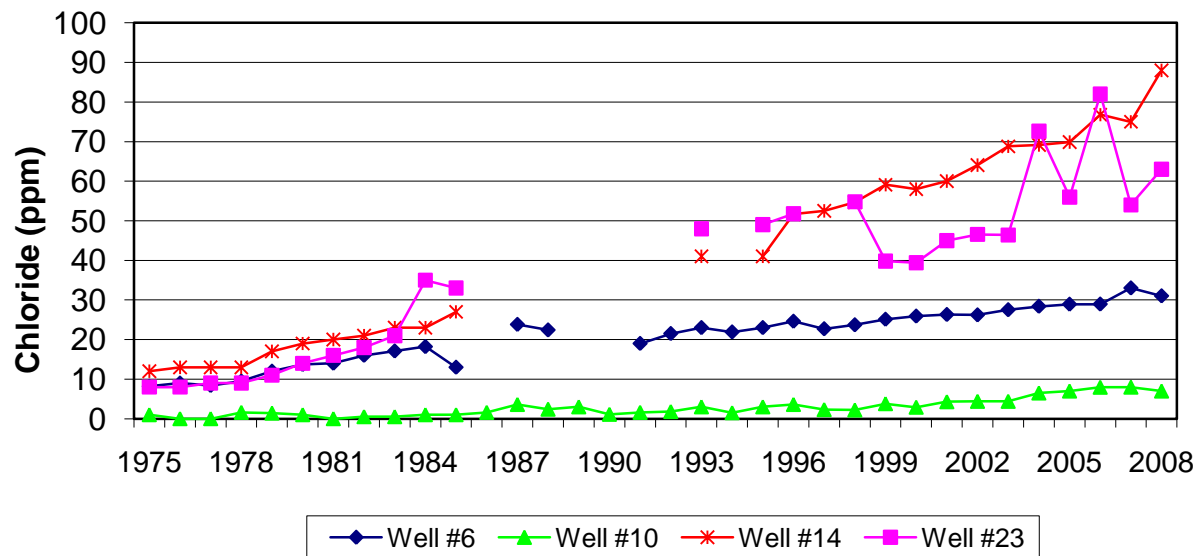
- **Good News:**
 - ❖ Low manganese concentrations found in most Madison homes
 - ❖ Waterborne illness rarely occurs in Dane County
- **Bad News:**
 - ❖ Nitrate levels high and private wells tested infrequently
 - ❖ Chloride levels increasing in municipal wells and surface waters
 - ❖ Phosphorus levels increasing in surface waters
 - ❖ Algae and bacteria causing problems in lakes and leading to beach closures

Results of Nitrate Testing in Private Wells, Dane County



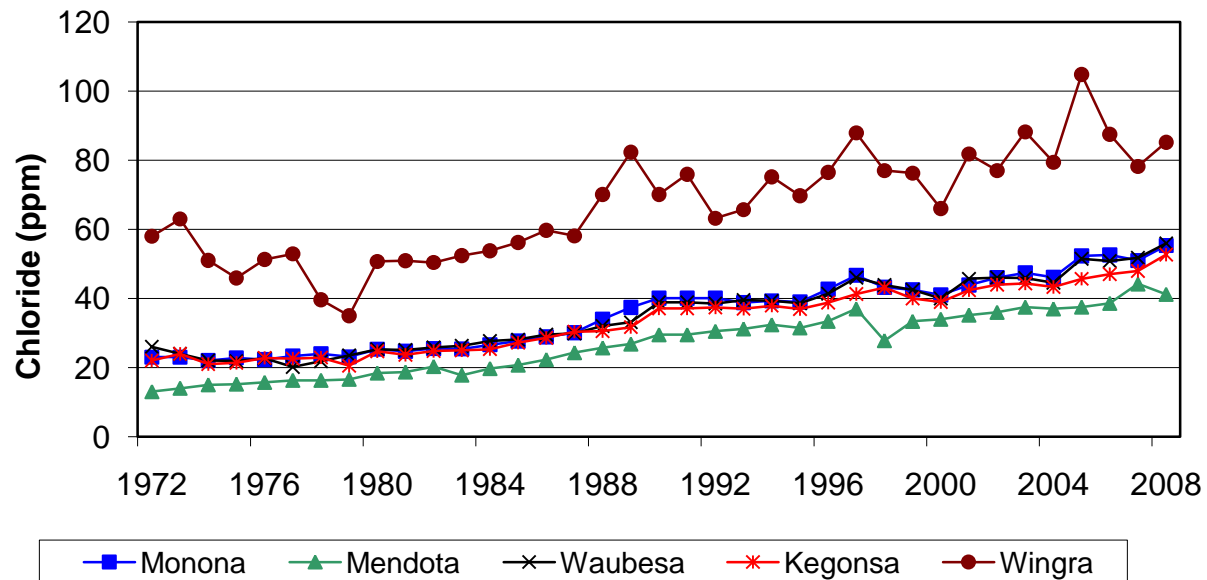
Data provided by WI Department of Natural Resources

Chloride Levels in Select Madison Wells



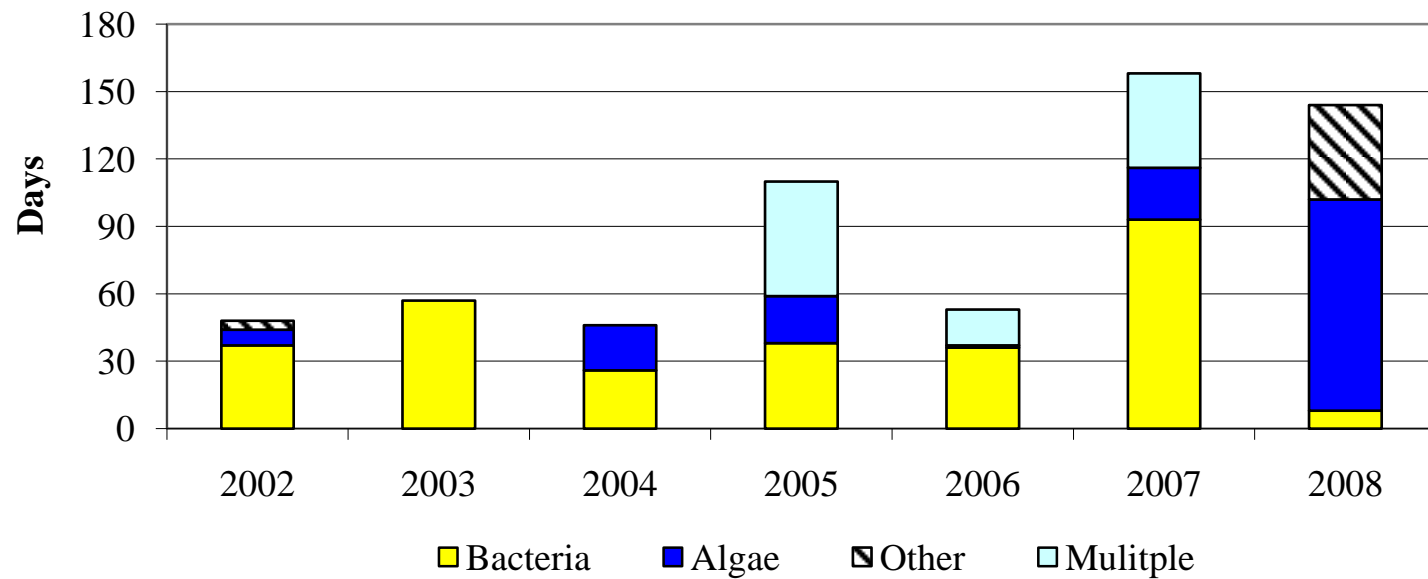
Data provided by Public Health for Madison and Dane County
Breaks in the trend lines indicate missing data

Dane County Lake Chloride Levels



Data provided by Public Health for Madison and Dane County

Dane County Beach Closures for Water Quality Problems



Data provided by Public Health Madison and Dane County

Water Quality – Human Health

- Recreational water use
 - ❖ No cases reported in 2007 related; seven cases reported in 2008.
 - Six of these cases related to algal bloom exposure
 - ❖ Since 1989, only 13 potential events reported.
- No cases of manganese poisoning in 2007 or 2008
- Over consumption of contaminated fish may increase the risk of chronic health conditions including cancer and neurological effects

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
- Divert storm water into rain gardens, rain barrels, etc (as appropriate)
- 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.
- Take necessary actions to reduce water quality problems in a timely manner.

Food Protection – Summary

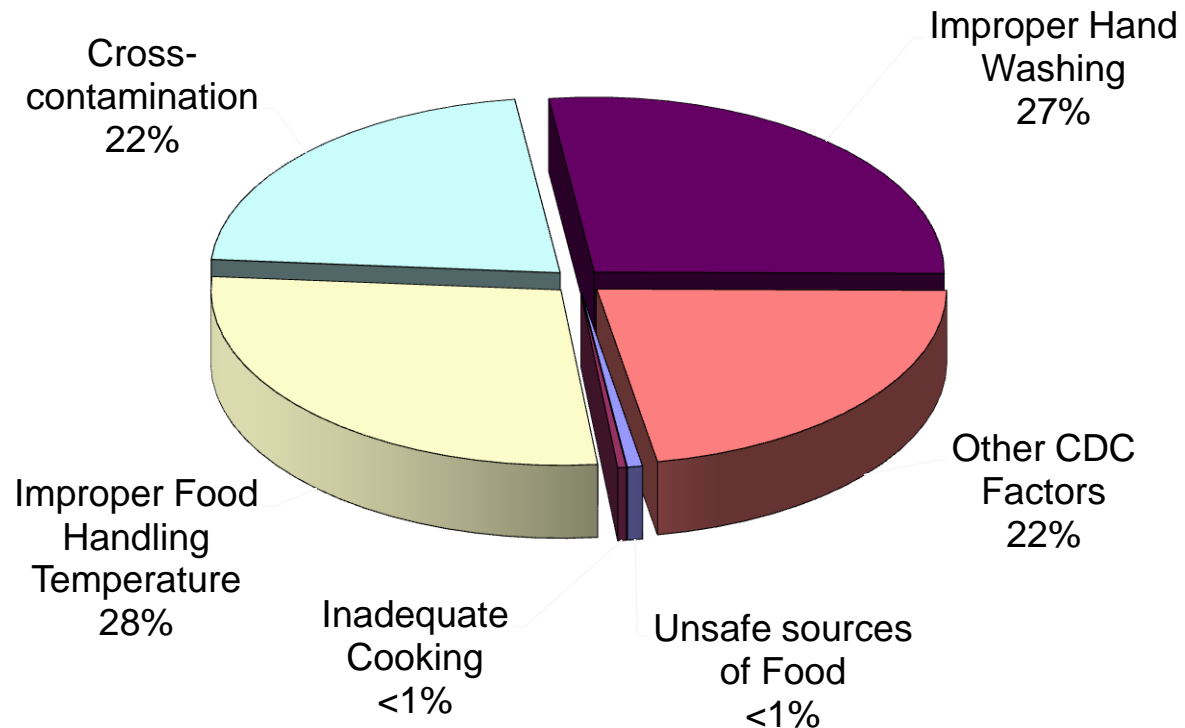
- **Good News:**

- ❖ Many high quality places to eat
- ❖ Few foodborne outbreaks recently

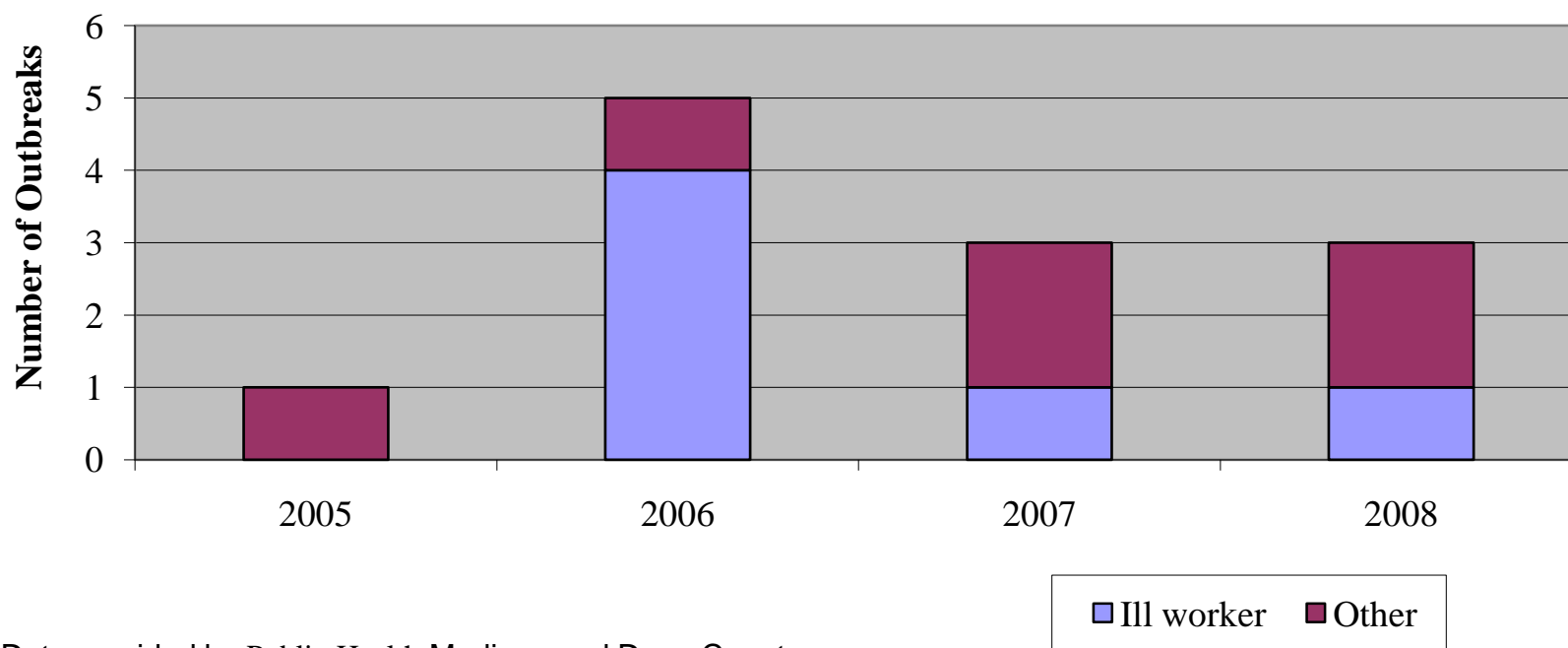
- **Bad News:**

- ❖ Problems that may lead to illness continue to persist
 - Hand washing
 - Sick food workers
 - Food holding temperatures

Percent of CDC Risk Factor Violations in Dane County Restaurants, 2008



Number of Foodborne Outbreaks in Dane County Establishments



Data provided by Public Health Madison and Dane County

Food Protection – Human Health

- Cases reported in 2007 – 2008
(per 10,000 population)
 - ❖ 2007
 - 15 cases of *Campylobacter* infection
 - 11 cases of *Salmonella* infection
 - ❖ 2008
 - 24 cases of *Campylobacter* infection
 - 13 cases of *Salmonella* infection
- 255 cases of norovirus in during 2007 - 2008
- 10 cases of *Clostridium perfringens* in 2007

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

Healthy Homes & Communities - Summary

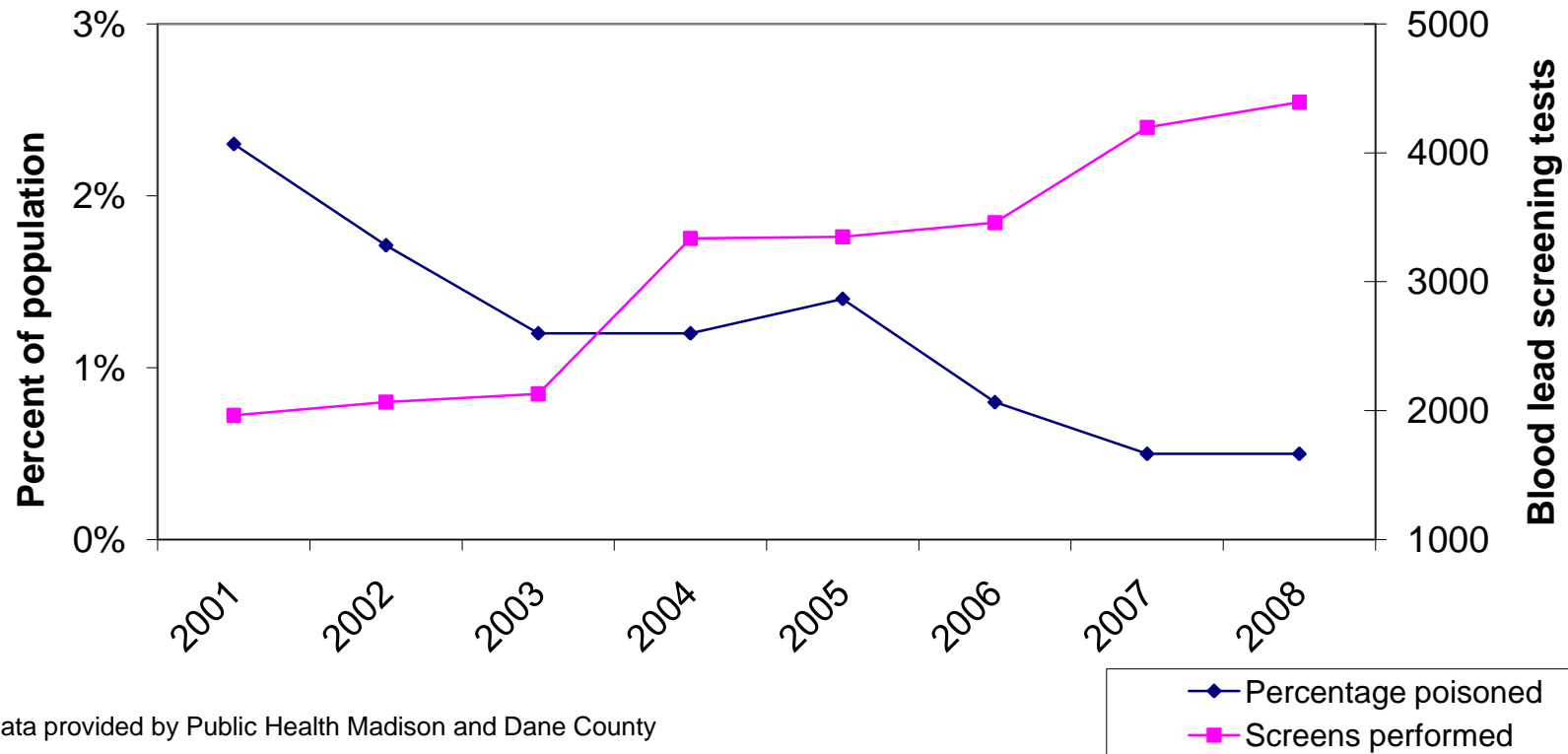
- **Good news**

- ❖ Lead poisoning continuing to decline
- ❖ Fewer tobacco vendors selling to minors
- ❖ 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 will take effect in July of 2010

- **Bad news**

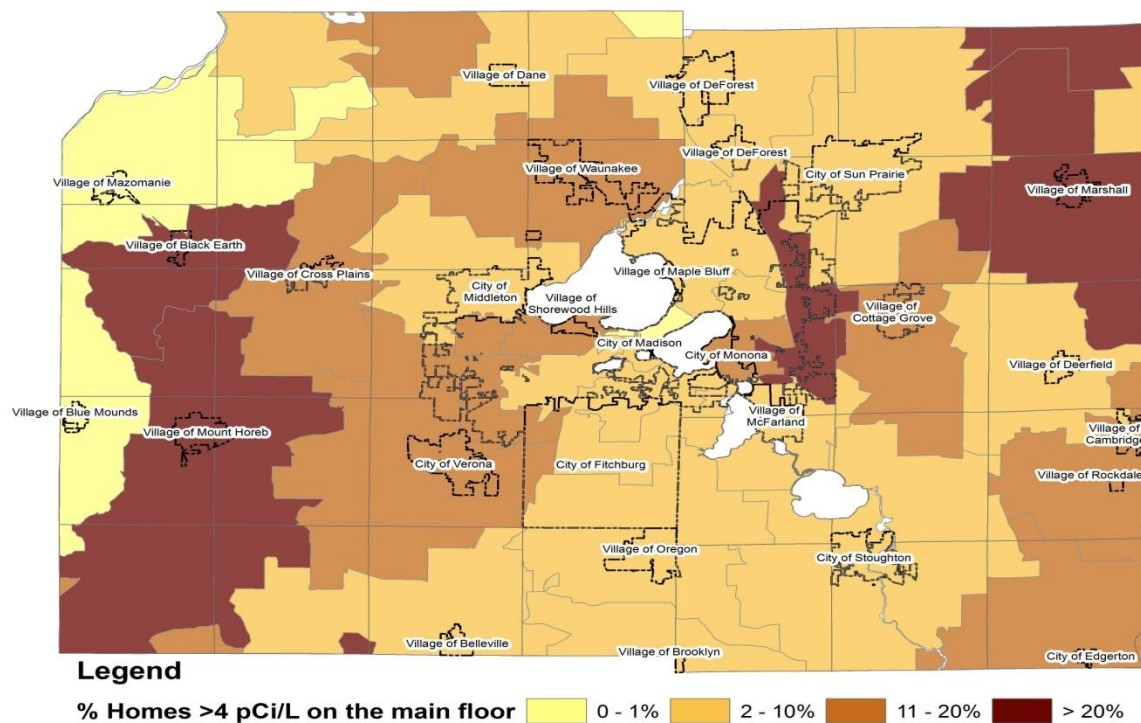
- ❖ 22% of young children tested for lead when 35 -50% at risk
- ❖ ≤ 25% of Dane County homes have been tested for radon

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



❖ Approximately 21% of Dane County home stock is pre-1950; an estimated 90% of all children first identified with lead poisoning live in these homes

Estimated percent of homes with elevated radon levels (> 4 pCi/L) on the main floor



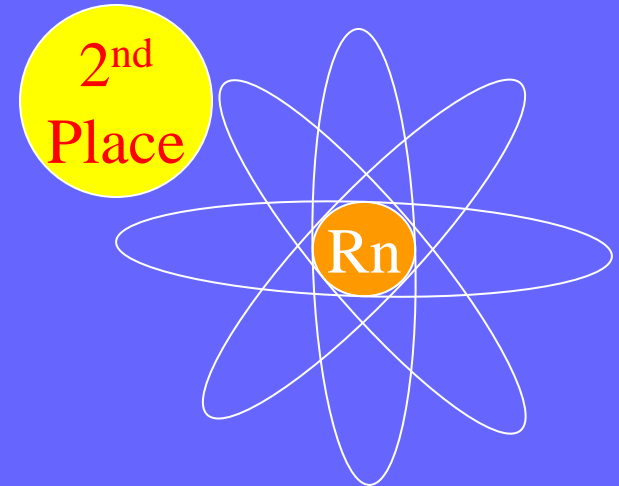
Data provided by WI Dept of Health and Family Services

Healthy Homes & Communities - Human Health

- Lung cancer



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Increased Cancer Risk

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 to reduce exposure to second hand smoke

- Community Actions

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

Sustainability- Summary

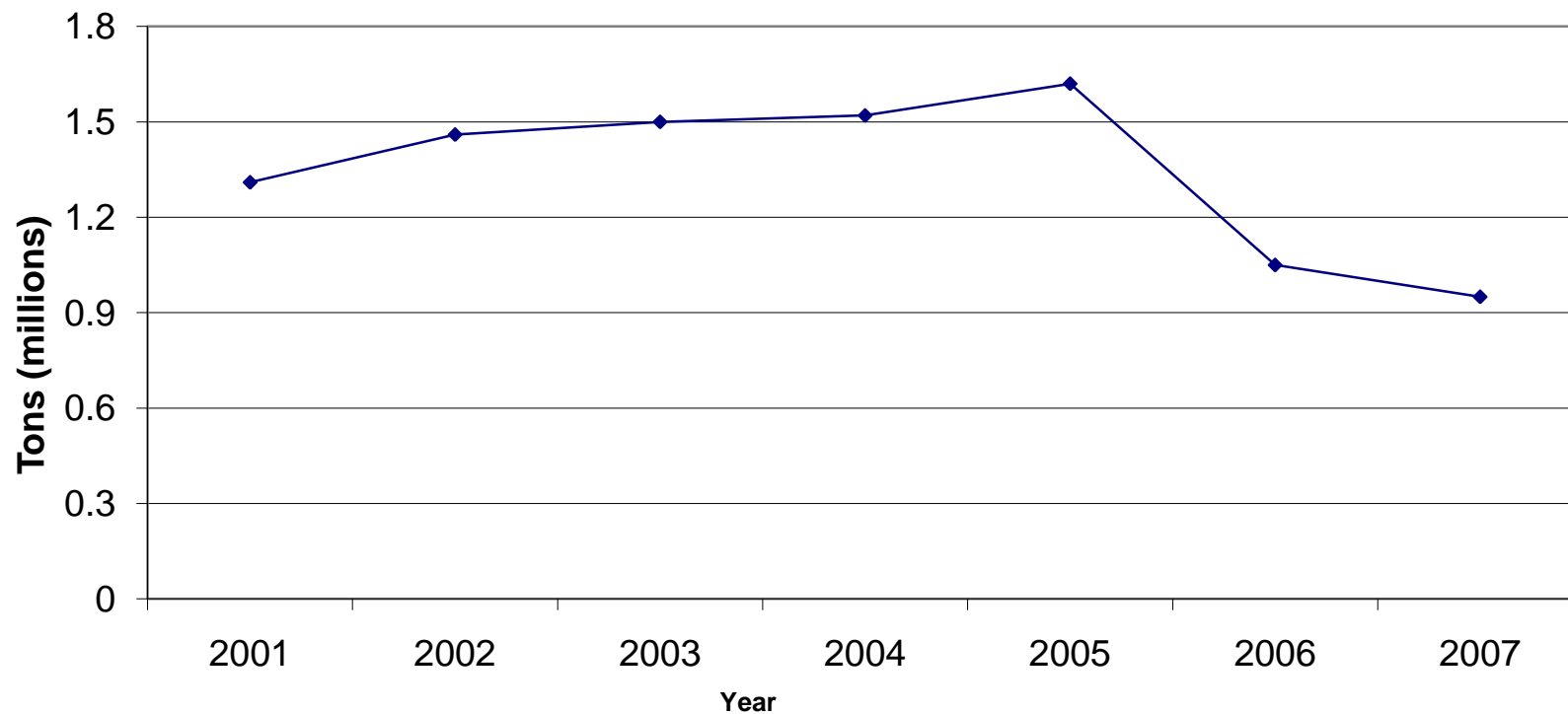
- **Good news**

- ❖ Point source emissions of CO₂ continues to decrease
- ❖ The amount of recycled material per resident has increased approximately 10%
- ❖ Total water pumped remains stable during past decade despite an annual 1.5% growth in Dane County population

- **Bad news**

- ❖ Data for mobile and area source emissions of CO₂ unavailable
- ❖ Increases in the amount of waste delivered to landfill
- ❖ Only 23% of annual waste is recycled
- ❖ Draw downs in aquifer water levels reported

Estimated CO2 Emissions for Dane County

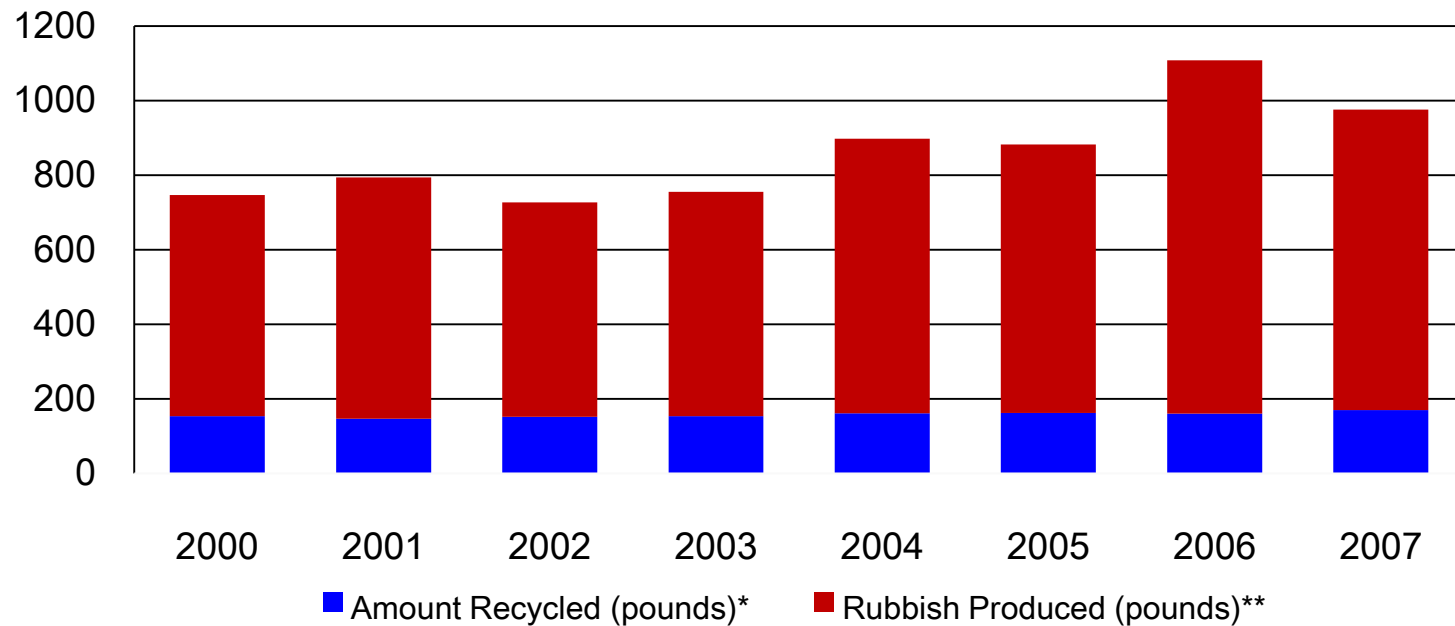


* Emissions were calculated using emission factors from the Intergovernmental Panel on Climate Change (IPCC).

**Only point source data is available. No data from mobile or area sources was available for inclusion.

Data provided by WI Dept of Natural Resources

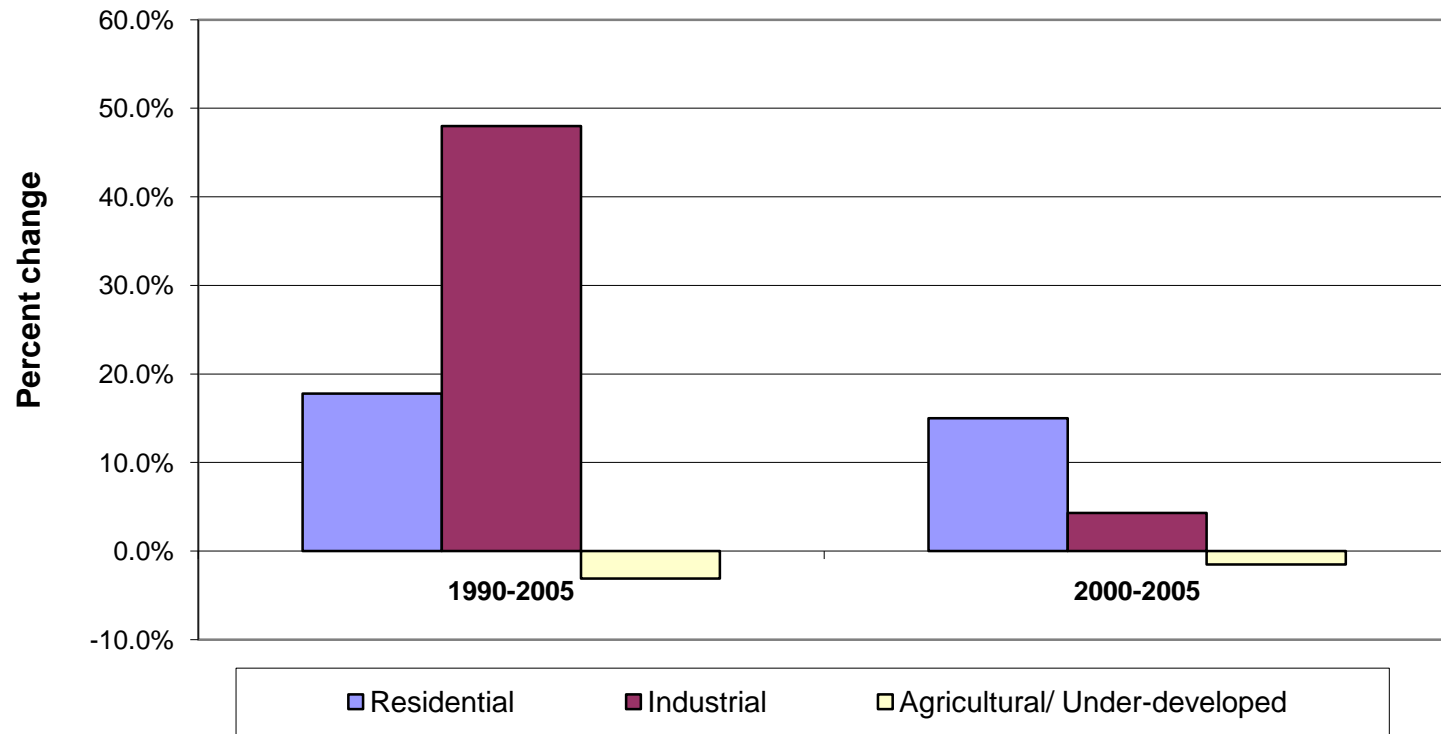
Amount of Solid Waste Produced per Dane County Resident



* Data provided by WI Dept of Natural Resources

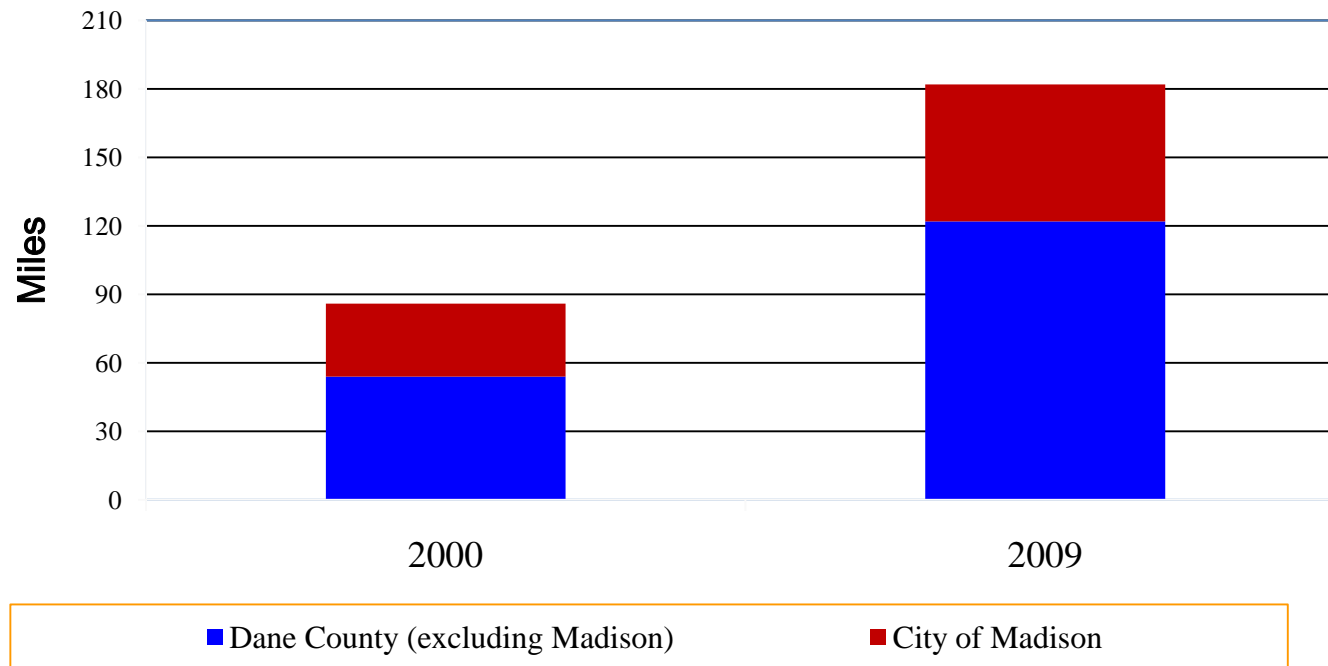
** Data provided by Dane County Public Works, Highway, and Transportation

Acres of Land Use in Dane County



Data provided by Dane County Planning and Development

Total Miles of Bike Trails



Data provided by the Madison Areas Transportation Planning Board

- Although overshadowed by notable decreases in agricultural acreage over the past decade, increases have occurred in lands devoted to recreational activities including biking trails, historic and cultural sites, and preserved natural resource areas.

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
- ❖ Support local farmers with your business

- Community Actions

- ❖ Design and support programs to increase energy efficiency and water conservation
- ❖ Provide and expand alternatives to land filling waste
- ❖ Improve zoning protections for natural & agricultural areas



Public Health
MADISON & DANE COUNTY

Healthy people and places

Thanks for your attention

Additional questions?