

# The Approaching EPA Avalanche

“AN EPA REGULATORY SPREE UNPRECEDENTED IN U.S. HISTORY” *Wall Street Journal*, March 4, 2011

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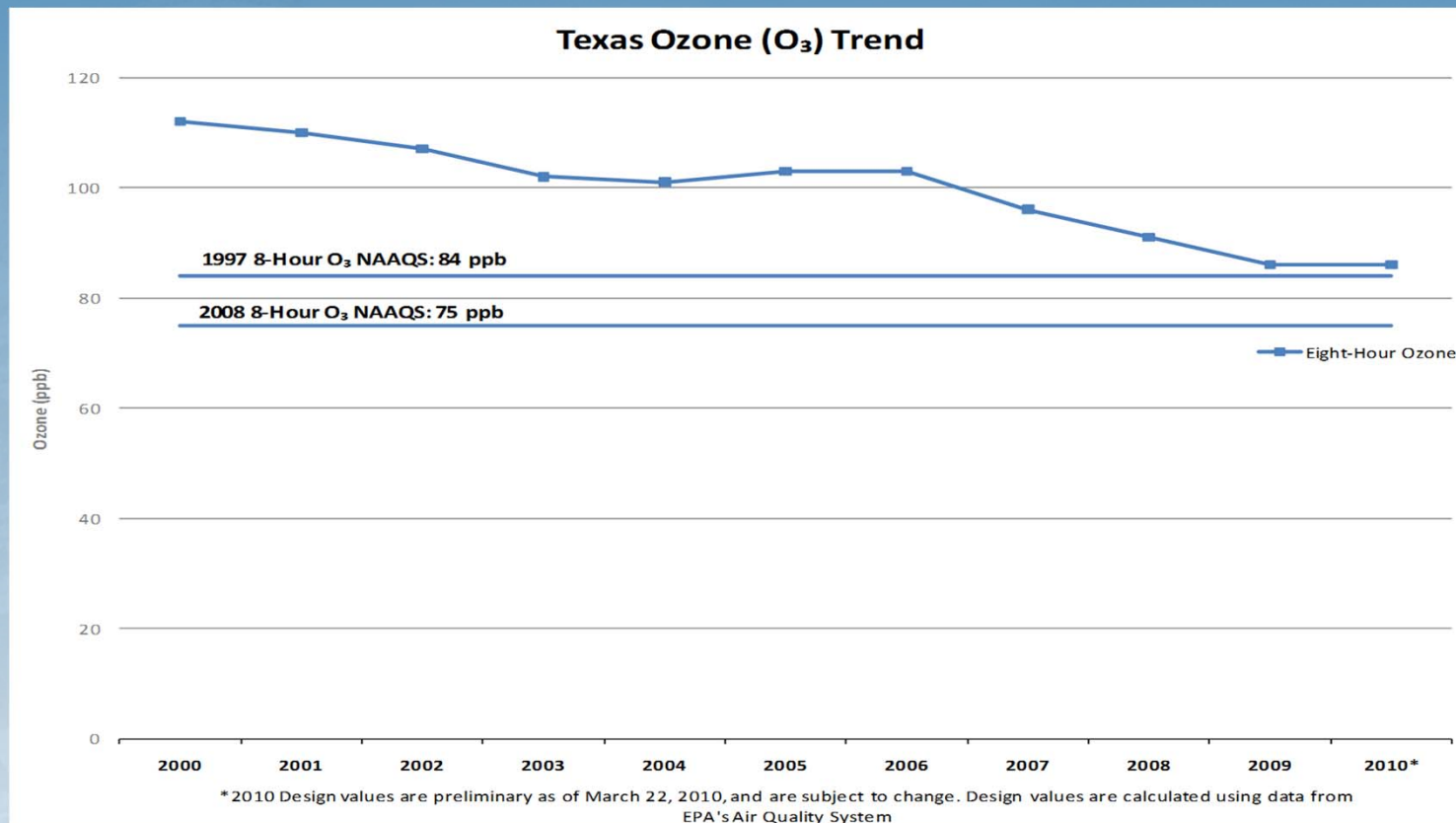


# An Avalanche of New EPA Rules

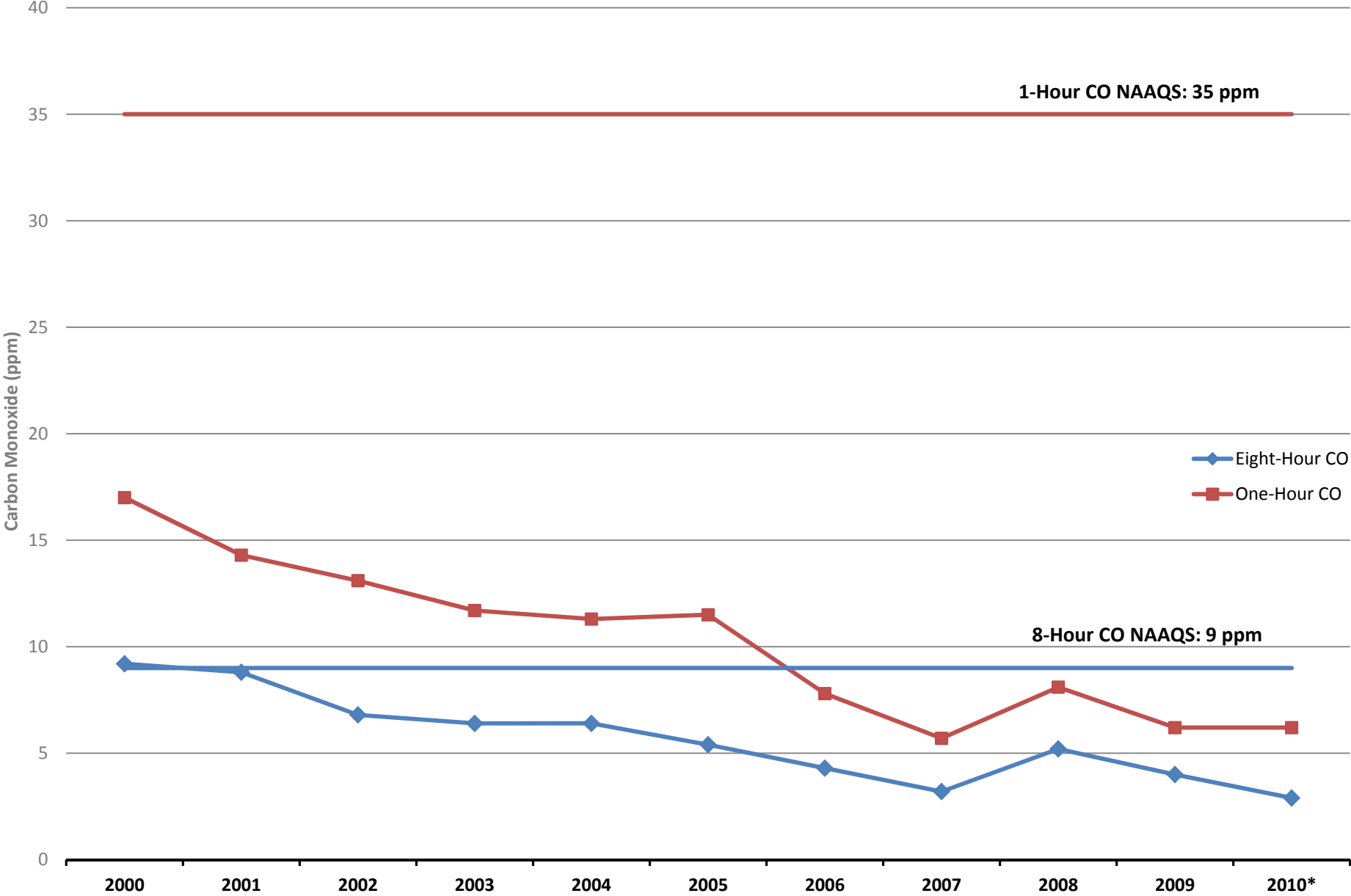
- The EPA is churning out new regulations in unprecedented number, speed, scope, stringency, and cost.
- The National Electric Reliability Council: Four of the EPA rules could force retirement of up to 77 GW of electric generating capacity by 2015.
- An unusual opponent of EPA, organized labor strongly opposes key EPA rules.
- Compliance costs of single rules now in billions.
- Relocation of U.S. business to foreign countries.

# There Is No Environmental Crisis!

- Texas has a record of major environmental achievement.

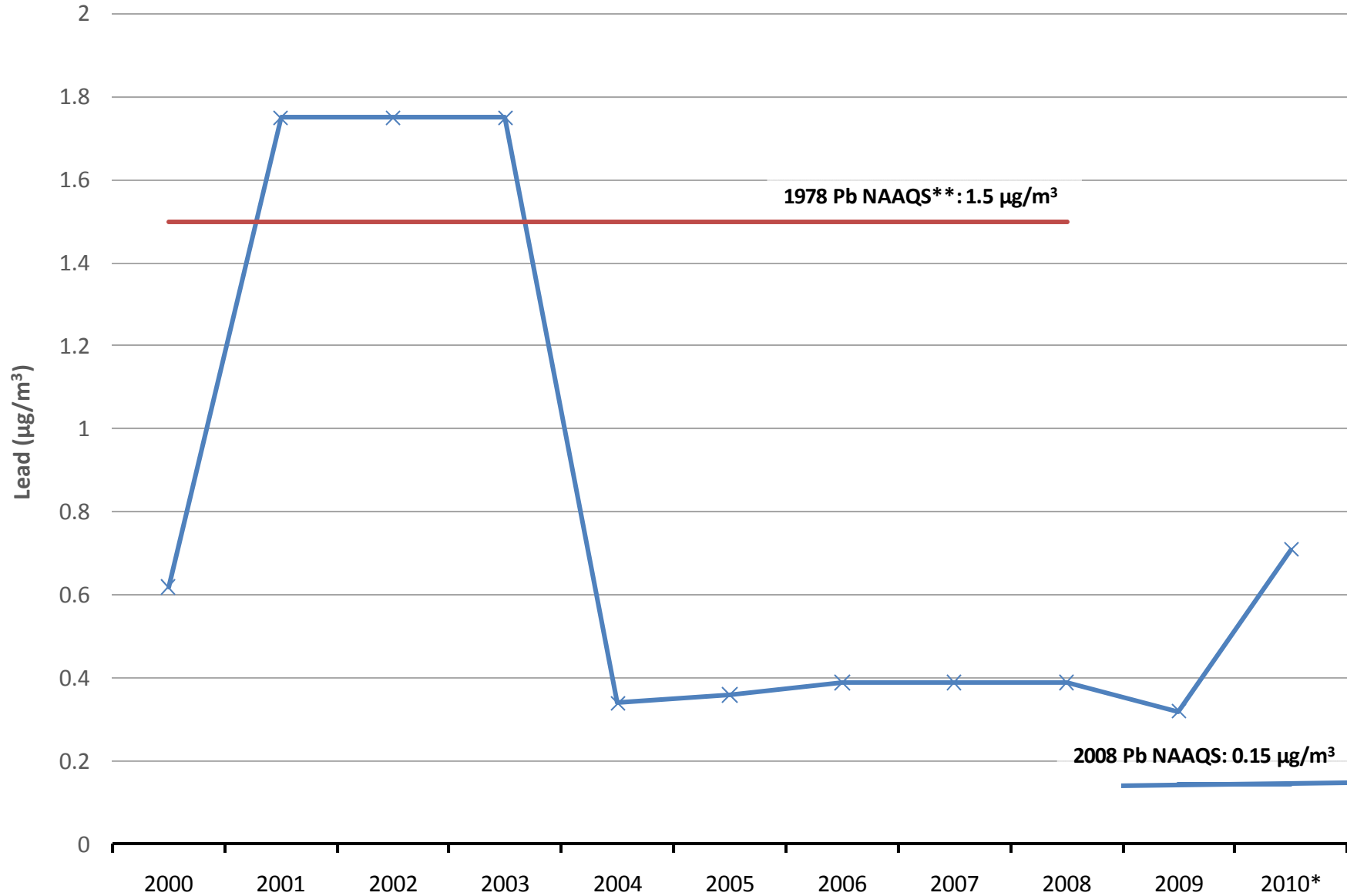


# Texas Carbon Monoxide (CO) Trend



\*2010 Design values are preliminary as of March 22, 2010, and are subject to change. Design values are calculated using data from EPA's Air Quality System

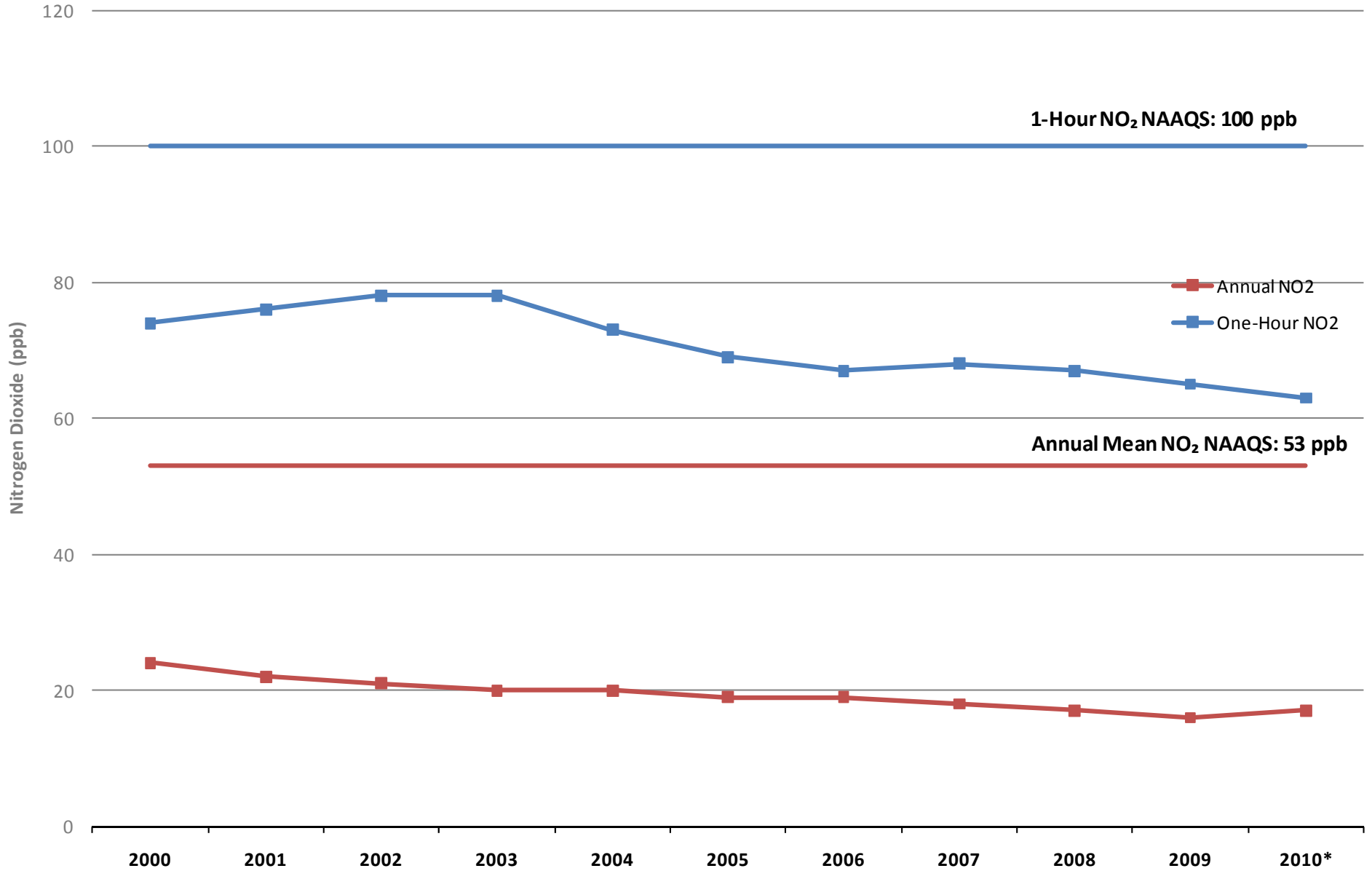
## Texas Lead (Pb) Trend



\*2010 design values are preliminary as of March 22, 2010, and are subject to change. All design values are calculated using data from EPA's Air Quality System.

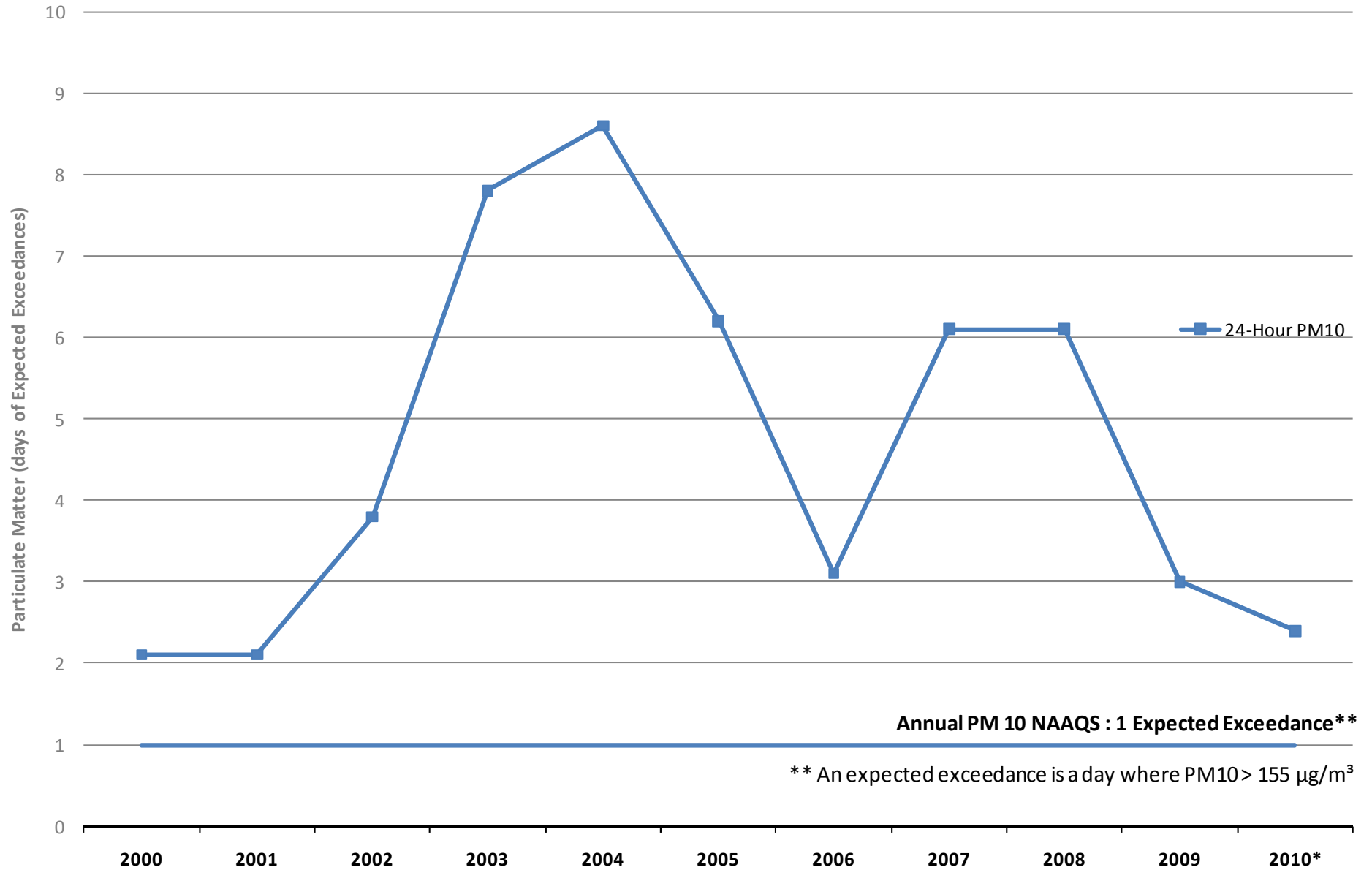
\*\*The lead NAAQS was revised in 2008 and implemented 2009, all design values are calculated according to the 2008 Lead NAAQS.

# Texas Nitrogen Dioxide (NO2) Trend



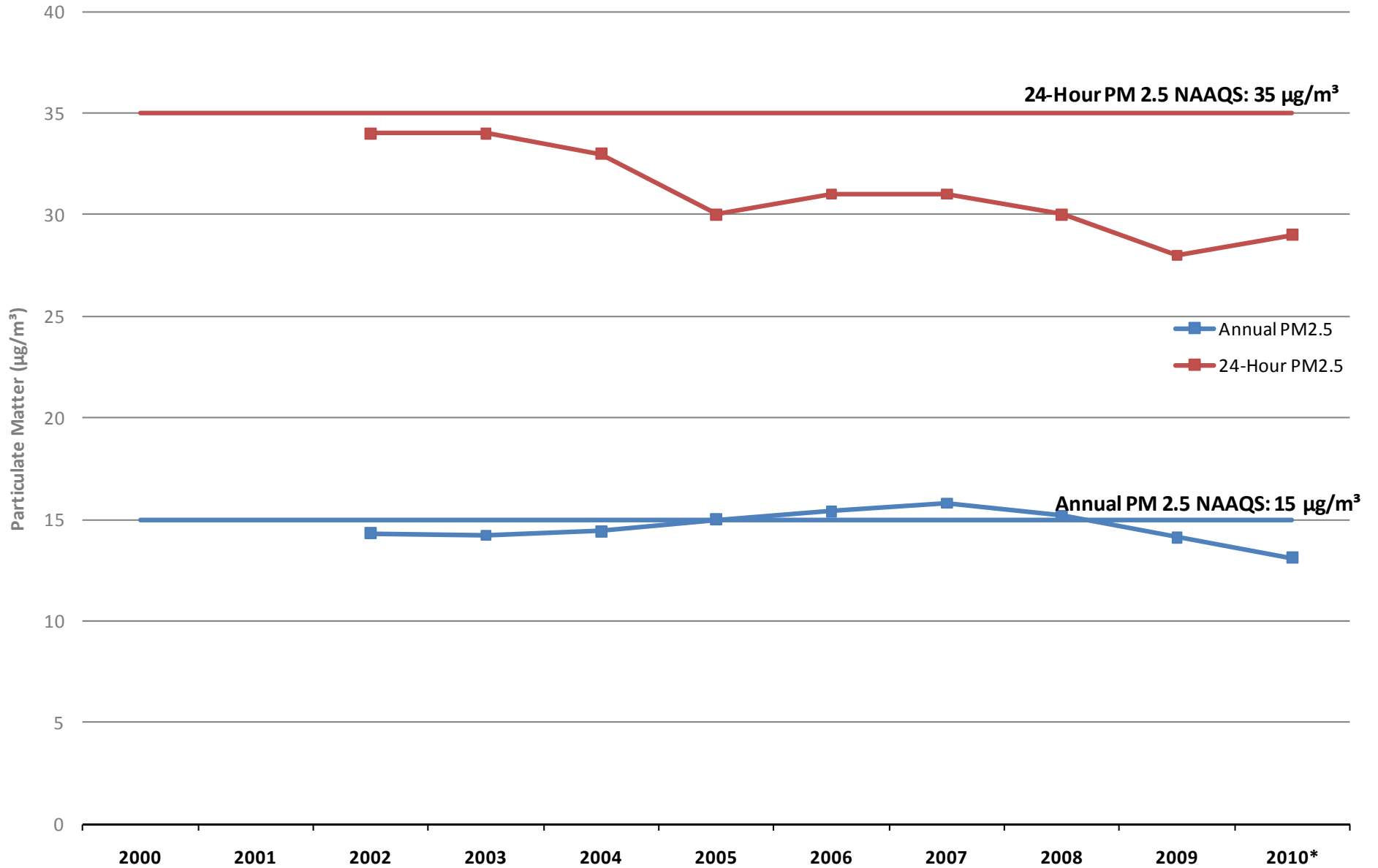
\*2010 Design values are preliminary as of March 22, 2010, and are subject to change. Design values are calculated using data from EPA's Air Quality System

# Texas Particulate Matter (PM 10) Trend



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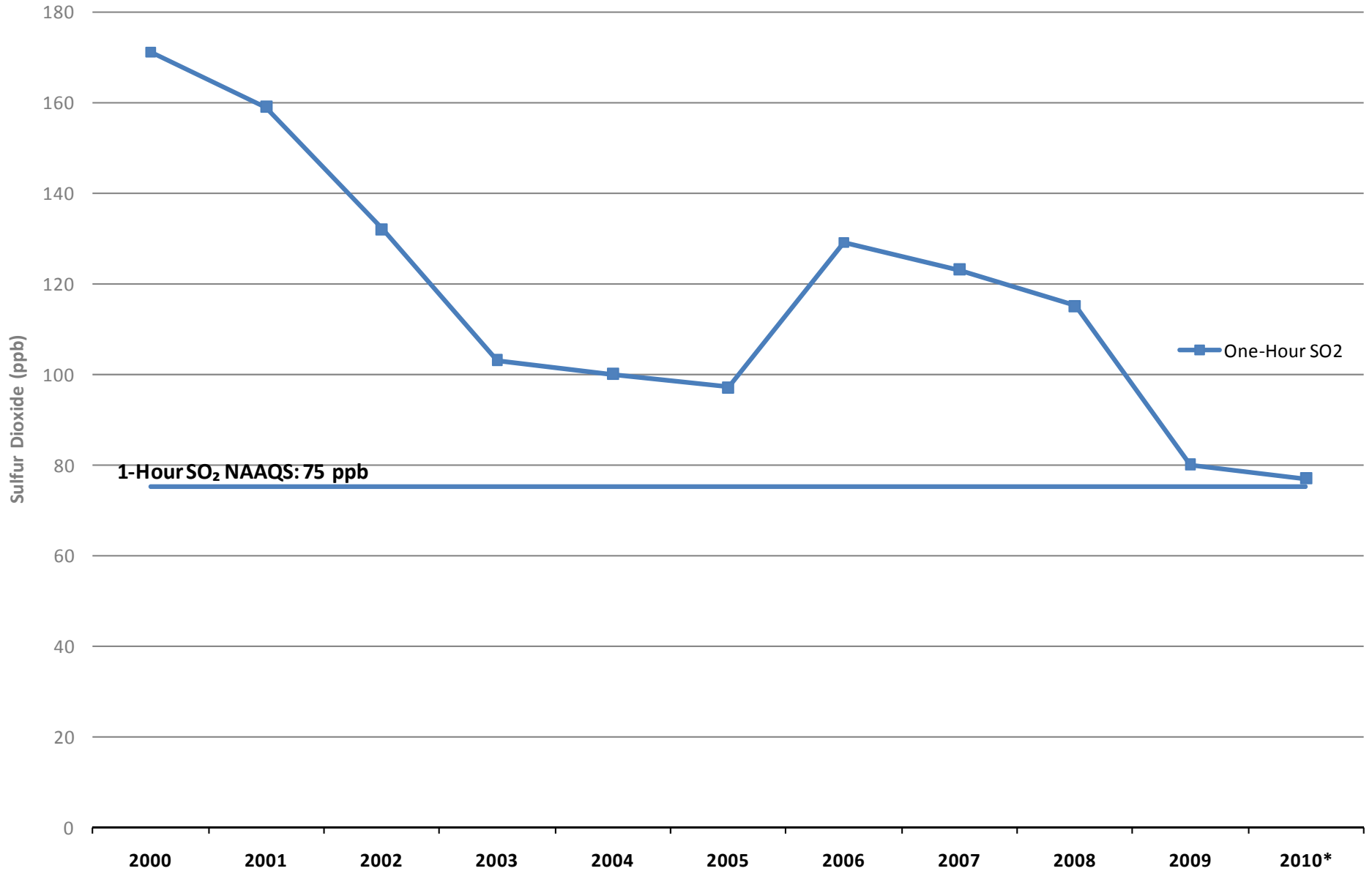
# Texas Particulate Matter (PM 2.5) Trend



\*2010 Design values are preliminary as of March 22, 2010, and are subject to change. Data is not available prior to 2002. Design values are calculated using data from EPA's Air Quality System



# Texas Sulfur Dioxide (SO<sub>2</sub>) Trend



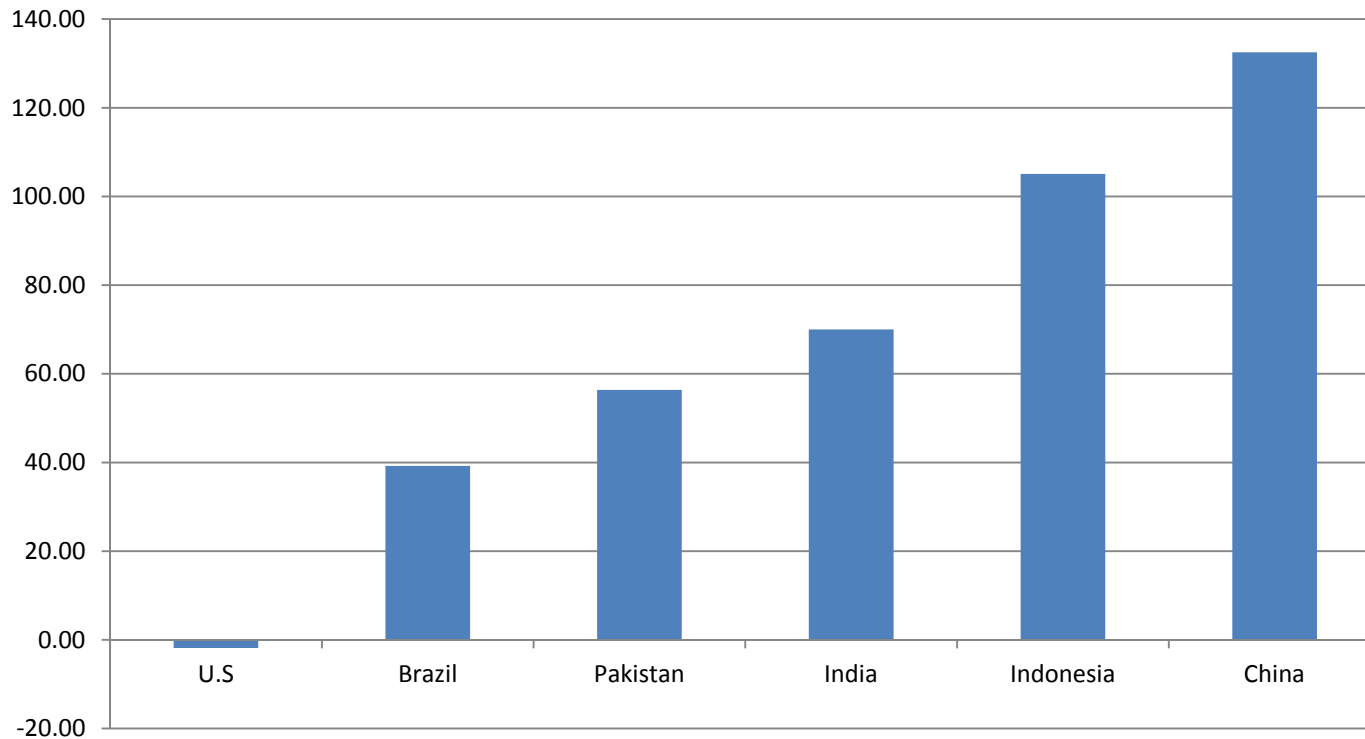
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## Change in National Average Ambient Levels and Emissions 1980-2008

	Ambient	Emissions
Carbon Dioxide (CO2)	-79%	-58%
Ozone (O3)	-25%	-49%
Lead (Pb)	-92%	-96%
Nitrogen Dioxide (NO2)	-46%	-40%
Particulates (PM10) 1985-2008	-31%	-46%
Fine Particulates (PM2.5) 1985-2008	-21%	-36%
Sulfur Dioxide (SO2)	-71%	-56%

Source: EPA

## Percent Change in CO2 Emissions Per Capita in the Six Most Populous Countries, 1990-2007



Source: International Energy Agency, "CO2 Emissions from Fuel Combustion 2009," <http://www.iea.org/co2highlights/co2highlights.pdf>, 90-91

# Houston, Texas: An Amazing Environmental Story

- Home of the world's largest petro-chemical complex, with a Gulf climate optimal for ozone formation. Long vying with Los Angeles for the most ozone-polluted city in the U.S.
- In 2009 and 2010, Houston attained the still legally binding 85 ppb NAAQS for ozone.
- A result of stringent, but targeted and market-oriented, regulation designed by TCEQ, billions of capital investment, cutting-edge science, innovative technology, fine-tuned management, EPA-state-local-community-industry partnerships.

# Converging Dates & Cumulative Impacts

- GHG Regulation
- Clean Air Transport Rule (CATR)
- Cooling Water Intake Rule (CWIR)
- Coal Combustion Residuals Rule (CCR)
- Utility Maximum Available Control Technology (MACT)
- Ozone NAAQS
- Particulate Matter NAAQS
- Industrial Boiler MACT
- Portland Cement Kiln MACT



# GHG Regulation

- Six rules rushed over 12 months with an effective date of January 2, 2011.
- EPA concluded that regulating GHG under CAA would be absurd (one permitting universe would increase from 12,000 to 6 million). So, EPA illegally “tailored” (re-wrote) black-letter CAA regulatory thresholds to limit initial regulation to big facilities.
- First phase in eventual reduction of CO<sub>2</sub> emissions by 80 percent, back to the late 1890s.



# Clean Air Transport Rule

- EPA's purpose is to reduce interstate transport of power plant emissions of SO<sub>2</sub> and NO<sub>x</sub>.
- Targeted states in violation of 24-hour particulate standards less than 0.5 % of time between 2008-2009.
- EPA's projected cost of compliance: \$7 billion.
- So much for the trade in cap-and-trade.



# Cooling Water Intake Rule

- Most steam-generating power plants use surface water for cooling.
- New rule to require far costlier closed-cycle cooling towers to prevent fish impingement and entrainment. New fish won't do!
- Could cost \$64 billion, forcing retrofit of 444 plants, affecting 33 percent of U.S. electric generating capacity.

# Coal Combustion Residuals

- Fly ash and other residuals after coal combustion is valuable material in cement, road surfacing and dry wall.
- EPA considering mandating disposal under RCRA as solid waste or hazardous waste.
- Possible compliance costs: \$43 billion if classified solid waste; \$80 billion if classified hazardous waste.

## Utility Maximum Achievable Control Technology (MACT)

- Proposed 900 page regulation for new limits on mercury (Hg) (91% reduction) and on hazardous air pollutants (HAPs).
- EPA estimates compliance costs \$10 billion; the electric power industry estimates \$100 billion, and \$200 billion by 2020.
- 1300 electric generating units could be impacted.
- NERC estimates rule could force retirement of 15 GW of U.S. generating capacity.

# New Ozone NAAQS

- January 2010 EPA reversed 2 year standard – less than six months after Houston attained the standard.
- CRS estimates that new threshold (60-70 ppb) would increase number of counties in non-attainment from 85 to 650 of 3,000 U.S. counties.
- At 65 ppb, Brewster Cty.,TX- nonattainment
- EPA est. implementation cost: \$90 billion.



# PM NAAQS

- EPA considering strengthening coarse and fine particulate standards.
- Coarse standard now includes country dust.
- New standards could prevent farmers from tilling on certain days. Could require paving or watering country roads in the U.S.

# Industrial Boiler MACT

- Adopted rule imposes maximally stringent emissions limits and monitoring requirements on HAPs from 200,000 boilers.
- Best performing businesses claims limits are unachievable.
- United Steel Workers and other unions claim new rule could send 700,000 U.S. jobs overseas.
- 62 Senators & 117 Congressmen urged reconsideration.

# Portland Cement Kiln MACT

- New EPA rule binds 165 of 181 Portland cement kilns operating in U.S.
- MACT limits unachievable for many plants.
- 18 plants may close.
- Current imports of cement from China (20 million tons) will more than double (to 48 million tons).
- EPA estimates rule will reduce U.S. cement production by 8-15 percent.

# Risk to U.S. Electrical Generating Capacity

- NERC predicts that four rules (not including ghg) jeopardize U.S. electric reliability.
  - 76,000 MW of existing capacity could be lost.
  - Would in effect force closing of coal-fired EGUs.
- Three other studies find higher risk:
- 100 GW of coal-fired EGU capacity at risk.
  - 10% of total US capacity(1010 GW) from source that provides 50% of U.S. electricity. Coal is critical for base-load generation.



# EPA Must Be Checked

- Exceptional times—exceptional responses.
- Litigation
- Legislation
  - Some version of the REINS Act
  - Deny EPA GHG authority
  - Amendments to Clean Air Act and Clean Water Act
  - Stronger scientific standards

# At the Least

- Too much too fast-cumulative impacts
- Crippling cost
- Marginal benefit
- Weak science—core of the problem
- Inopportune Time
- Jobs ?????

# EPA's Five Year Economic Plan

Evidently, they were not kidding!

Who was the guy who said “the environment should become the organizing principle of society”?

And the guy who said (fossil fuel) energy prices would necessarily skyrocket under his policy?

And who last year said he would like to see gasoline prices at \$7-\$8 per gallon.

# Energy Policy–Environmental Policy

- Environmental Policy has supplanted Energy Policy to drive centralized economic planning.
- Energy Policy no longer aims at abundant, reliable, resilient, affordable supply.
- Yet, the bounty of our energy sector evolved through risk-taking entrepreneurs' capital-intensive investment, technological innovation in a competitive market.



And If I Didn't Convince You That  
Big Trouble Lies Ahead ...

