

New EPA Proposals for Particulate Pollution Standards

Kasey Savanich/Erik Gribbin





Overview

- On December 20, 2005, EPA proposed revisions to the NAAQS for Particulate Matter
- A revised 24-hour standard for PM 2.5
- A new PM_{coarse} (i.e. PM_{2.5-10}) standard
- A **partial** revocation of PM₁₀ standard



Brief Schedule for PM Review

- Proposal signed on December 20, 2005 (consent agreement)
- Public comment period of 90 days
- Public hearings in Philadelphia, Chicago, San Francisco in late February 2006
- Final rule to be signed by September 27, 2006 (consent agreement)



Proposal Contents

- Current proposal includes simultaneous rules for PM NAAQS, Federal Reference Method, and Data Handling (Part 50) and air monitoring regulations (reference and equivalent methods, network design requirements) (Parts 53 and 58)
- Exceptional Events rule proposal is upcoming
- Implementation Advanced Notice of Proposed Rulemaking



Current and Proposed PM Standards

	Current Standards		Proposed Standards	
	Annual	24-Hour	Annual	24-Hour
PM _{2.5}	15.0 µg/m ³	65 µg/m ³	15.0 µg/m ³	35 µg/m ³
PM ₁₀	50 µg/m ³	150 µg/m ³	--	150 µg/m ^{3*}
PM _{coarse}	--	--	--	70 µg/m ³

*The 24-Hour PM₁₀ standard would continue until in some areas until PM_{coarse} designations are made.



Comment on PM_{2.5} Alternatives

- EPA is considering/asking for comment on alternative levels for the *24-hour* PM_{2.5} standard (30 to 35 $\mu\text{g}/\text{m}^3$). They are asking for comments on 25 to 65.
- EPA is considering/asking for comment on alternative levels for *annual* PM_{2.5} standard (13.0 to 14.0 $\mu\text{g}/\text{m}^3$). They are asking for comments on levels as low as 12.0.



Secondary PM_{2.5} Standard Proposals

- EPA is proposing secondary standards at levels identical to primary standards.
- EPA is taking comment on whether to establish a visibility based PM_{2.5} standard for urban areas somewhere between 20-30 µg/m³ with averaging times between 4 and 8 daytime hours.



PM_{Coarse} Standard Proposal

- Primary/secondary 24-hour standard proposed at $70 \mu\text{g}/\text{m}^3$
- Defining Coarse PM to focus on particles from 2.5 microns to 10 microns
- Further Defining Coarse PM to focus on particles coming from sources like:
 - High density traffic on paved roads
 - Industrial sources
 - Construction activities



PM_{coarse} Standard Proposal (contd)

- Proposed standard would not cover rural sources like:
 - Windblown dust and soil
 - Agricultural sources
 - Mining sources
- These sources would not be subject to control in meeting proposed standard



Revoking the Current PM₁₀ Standard

- *Annual* PM₁₀ standard would be immediately revoked in all areas.
- 24-Hour PM₁₀ standard would be revoked in all areas *except*:
 - Areas with violating monitors **and**
 - With a population greater than 100,000 (El Paso)
- EPA is taking comment on whether 24-hour PM₁₀ standard should be kept in areas with smaller populations.



Timeline if PM_{2.5} NAAQS are Revised

Milestone	Date
Promulgation of Standard	November 2006
State Recommendation to EPA	November 2007 (2004-2006 data)
Final Designation	November 2009 (2006-2008 data)
Effective Date of Designation	April 2010
SIPs Due	April 2013
Attainment Date	April 2015 (2012-2014 data)
Attainment Date w/ Extension	April 2020



Timeline if PM_{coarse} Standard is Adopted

Milestone	Date
Effective Date of Standard	November 2006
State Recommendations to EPA	July 2012 (2009-2011 data)
Final Designations	May 2013
Effective Date of Designations	July 2013
SIPs Due	July 2016
Attainment Date	July 2018 (2015-2017 data)
Attainment Date with Extension	Up to July 2023



Texas Nonattainment Areas?

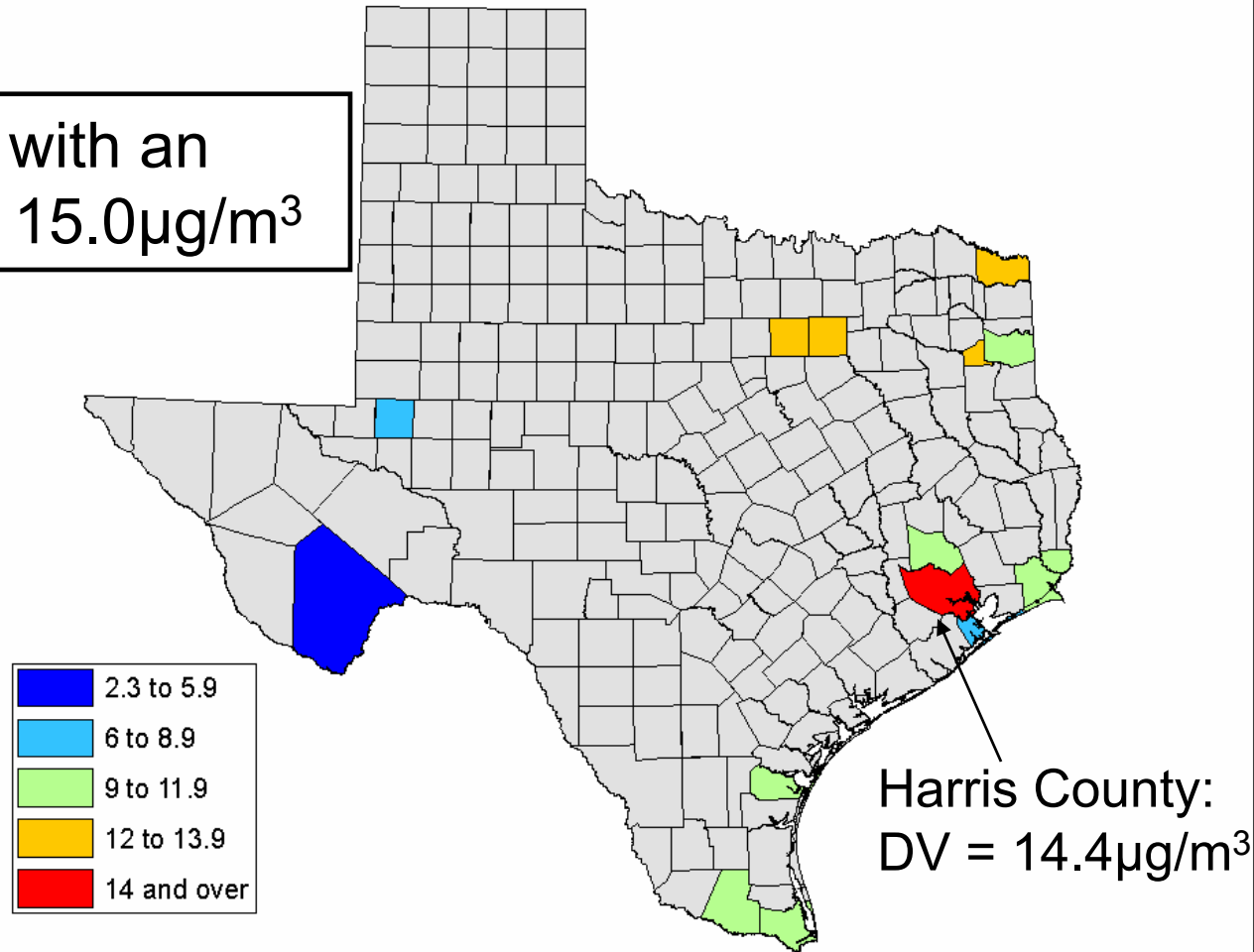
- So far, no new PM 2.5 nonattainment areas at 15.0/35
- PM Coarse unknown because we don't monitor for it – we'll need time to develop ball park estimates.
- If EPA adopts levels of 14.0 or 30 (as they are considering) some counties in Texas could be considered for nonattainment status.



Annual DV of $15.0\mu\text{g}/\text{m}^3$

2004 Official Annual Design Values from the 3-Year Period of 2002 to 2004 in Texas

No Counties with an
Official DV $> 15.0\mu\text{g}/\text{m}^3$



*Design Values from Mark Schmidt, Air Quality and Trends Analysis, U.S. EPA

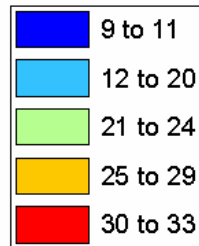


24-Hour DV of $35\mu\text{g}/\text{m}^3$

2004 Official Daily Design Values from the 3-Year Period of 2002 to 2004 in Texas

No Counties with an Official DV $> 35\mu\text{g}/\text{m}^3$

Dallas County:
DV = $33\mu\text{g}/\text{m}^3$



*Design Values from Mark Schmidt, Air Quality and Trends Analysis, U.S. EPA



Alternative Levels:

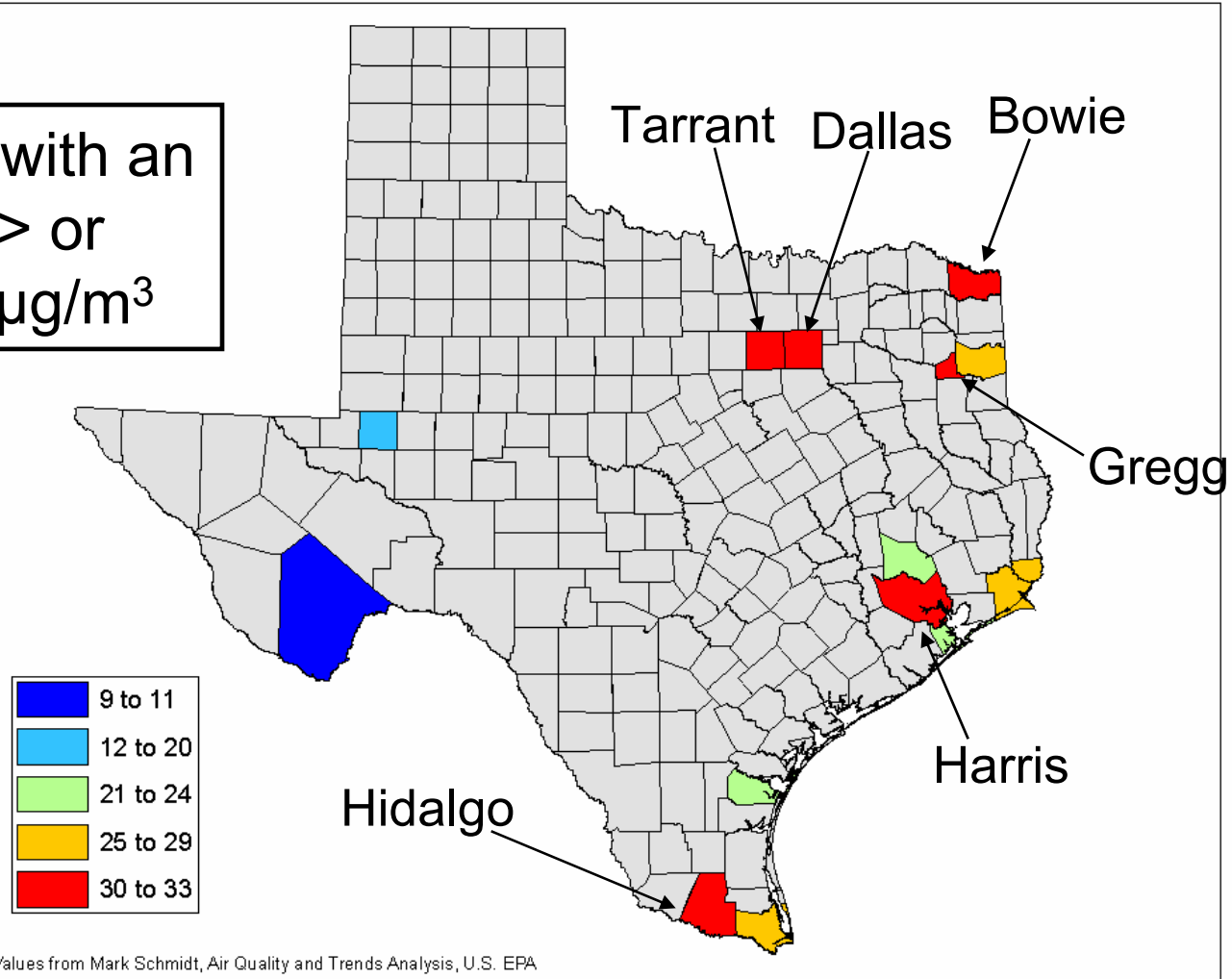
24-Hour PM 2.5 Standard



24-Hour DV $30\mu\text{g}/\text{m}^3$

2004 Official Daily Design Values from the 3-Year Period of 2002 to 2004 in Texas

6 Counties with an Official DV $>$ or equal to $30\mu\text{g}/\text{m}^3$

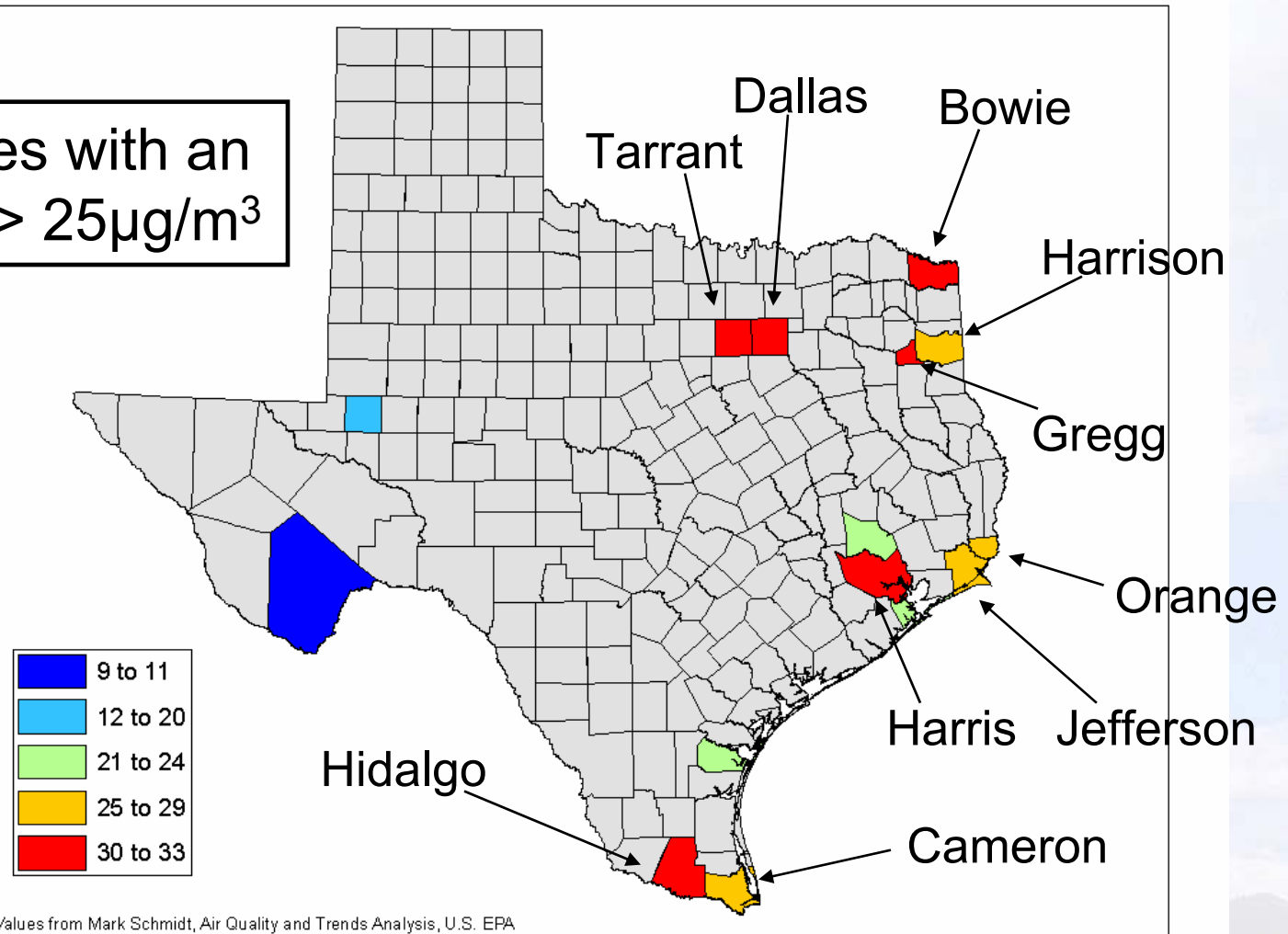




24-Hour DV $25\mu\text{g}/\text{m}^3$

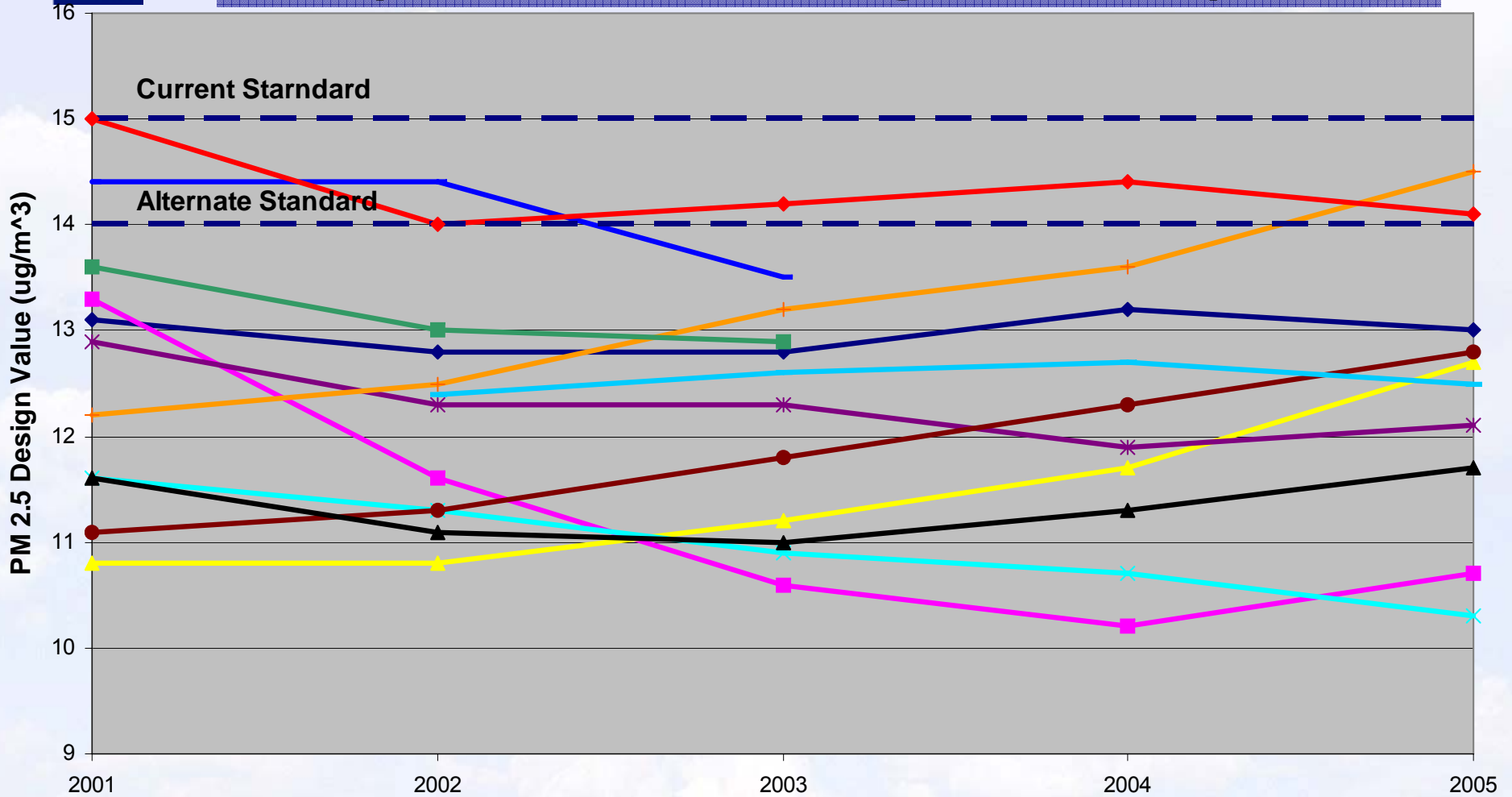
2004 Official Daily Design Values from the 3-Year Period of 2002 to 2004 in Texas

- 10 Counties with an Official DV $> 25\mu\text{g}/\text{m}^3$





Houston Area PM_{2.5} Trends (Estimated Design Values)



- ◆ Houston Aldine C8/C108/C150
- ◆ Channelview C15/C115
- ▲ Houston Croquet C409
- ◆ Houston Bayland Park C53
- ◆ Baytown C148
- ◆ Houston Monroe C406
- ◆ Houston Texas Avenue C411
- ◆ HRM-3 Haden Road C603/C114
- ◆ Houston East C1
- ◆ Clinton C403/C113/C304
- ◆ Houston Crawford C407
- ◆ Houston Deer Park 2 C35/139



Houston Area Monitors At Risk





Conclusion

- Texas will attain the annual standard
- Texas will attain the 24-hour standard
- Alternate Levels:
 - At least one County will exceed the annual standard if it is lower than $14.4\mu\text{g}/\text{m}^3$
 - At least one County will exceed the 24-hour standard if it is less than $33\mu\text{g}/\text{m}^3$



Contributors

- Shannon Herriott, TCEQ
- Mark Schmidt, EPA