

# **Pesticide Research: An Industry Perspective**

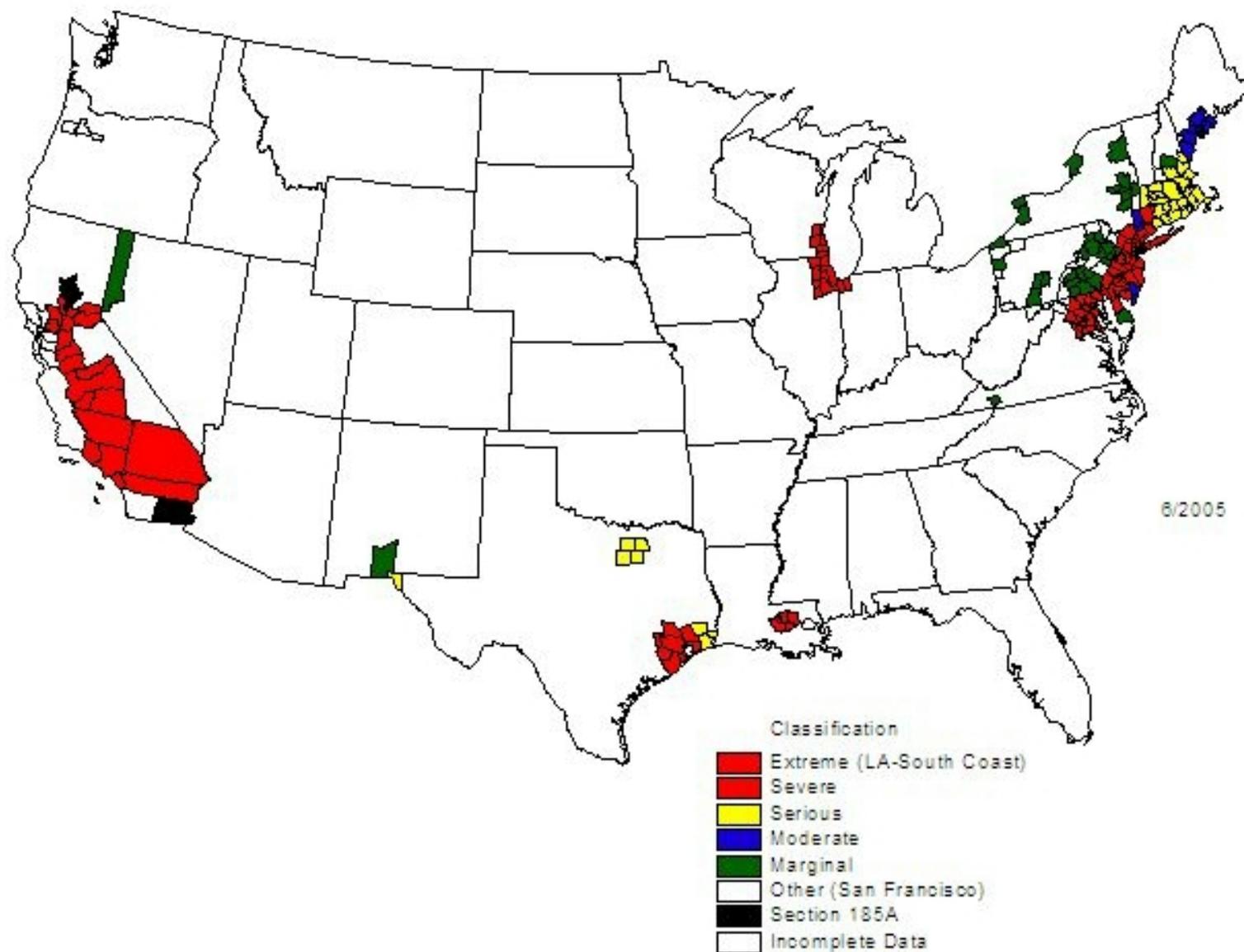
**DPR Pesticide VOC Research Symposium**



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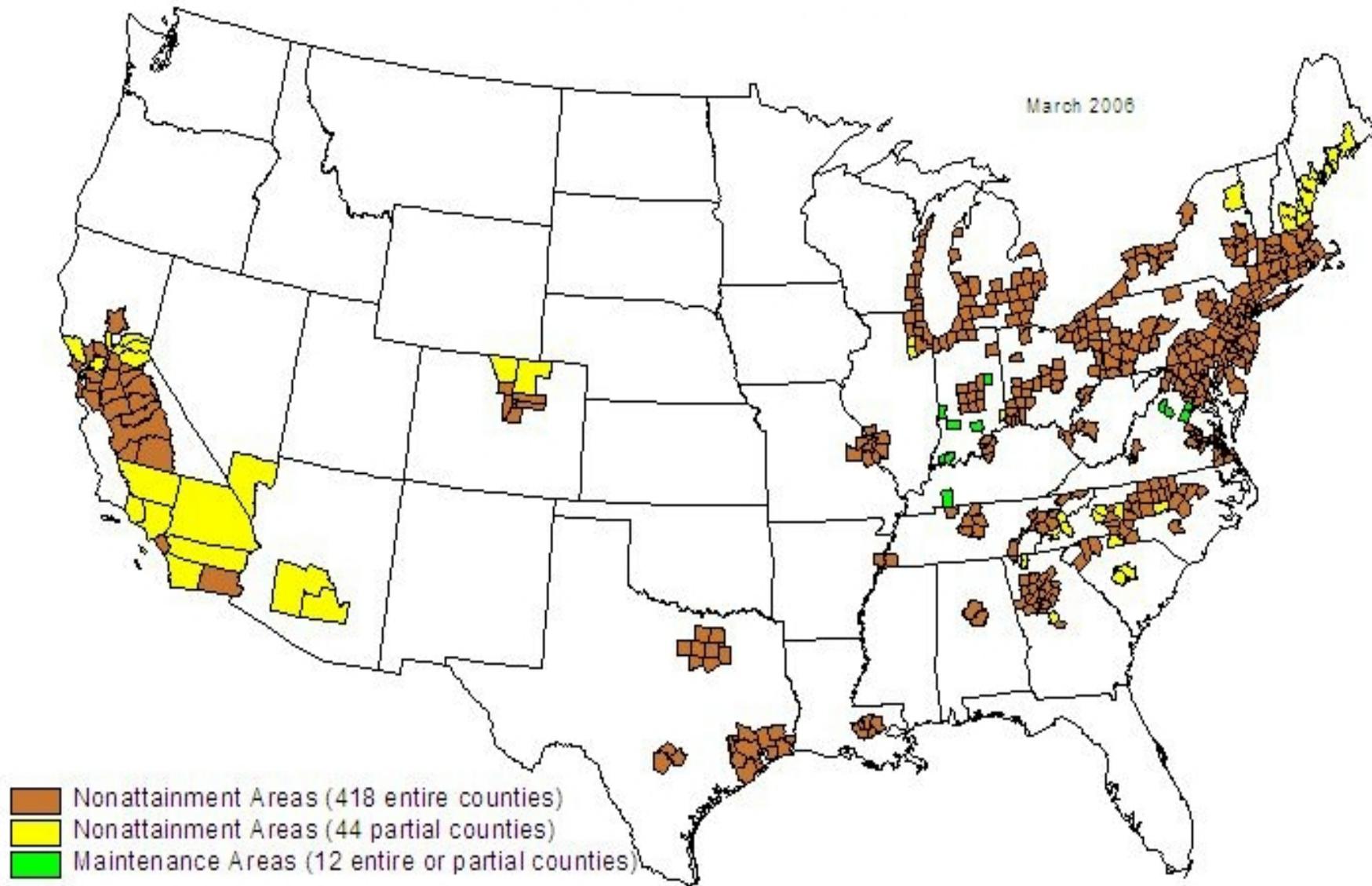
# Previous Nonattainment Areas No Longer Subject to the 1-hour Standard



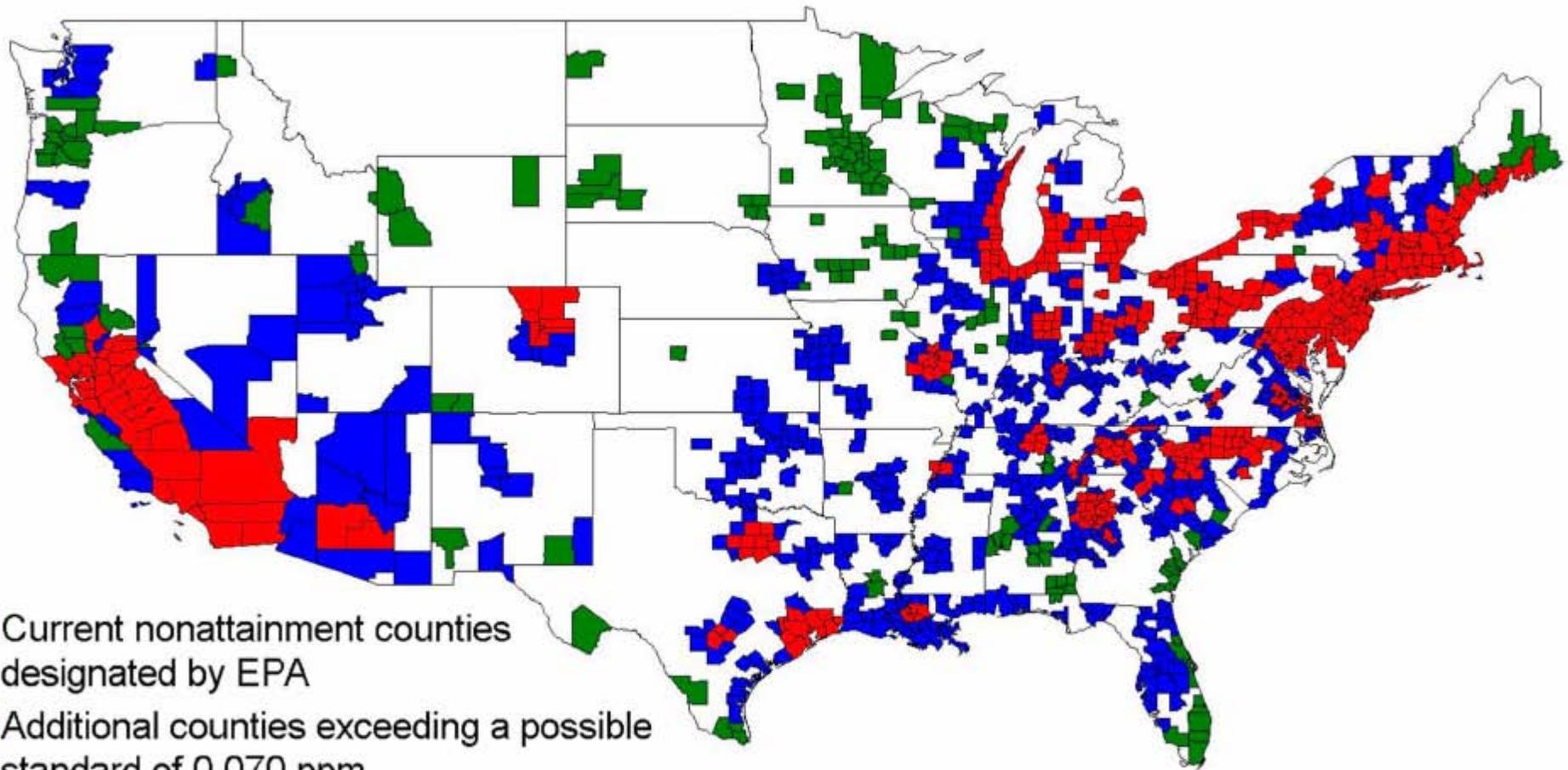
Classification colors are shown for whole counties and denote the highest area classification that the county is in

# Nonattainment and Maintenance Areas in the U. S. 8-hour Ozone Standard

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# Summary of Current 8-Hour Ozone Non-Attainment Areas and Additional Areas that Exceed Possible 0.060 and 0.070 ppm 4th Highest Standard for 2003 - 2005



- Current nonattainment counties designated by EPA
- Additional counties exceeding a possible standard of 0.070 ppm
- Additional counties exceeding a possible standard of 0.060 ppm

Source: Based upon U.S. EPA data interpreted by A.S.L. & Associates, Helena, MT

12/2006

# Actual Emissions

- DPR assumes 100% volatilization
- What are actual emissions?
- Questions?
  - Diurnal variations
  - Application methodologies
  - Environmental fate



# Fumigation

- Application Methods
- Need to develop faster, cheaper methods for determining field emissions (e.g. flux chambers, modeling)
- Equipment and methods to reduce emissions



# Alternatives to ECs

- Need methods to better estimate in-field emissions
- Efficacy
- Cotton's Experience
  - Glyphosate - maybe
  - Chlorpyrifos - no



# Reactivity

- Still use solvents, but lower ozone impact?
- May allow for quicker reductions
  - Registration time
  - Studies



# IPM

- Continue IPM research
- Continue IPM outreach and education
- Lower pesticide use means lower VOC emissions



# GMOs

- Continue GMO development
- Continue GMO education
- Cotton's experience
  - Bt cotton reduced pesticide use on cotton in Imperial Valley by 50%



# Final Thoughts

- Don't let policy get ahead of the science
- Incentivize (e.g. smart sprayers)
- Added costs must provide benefit



