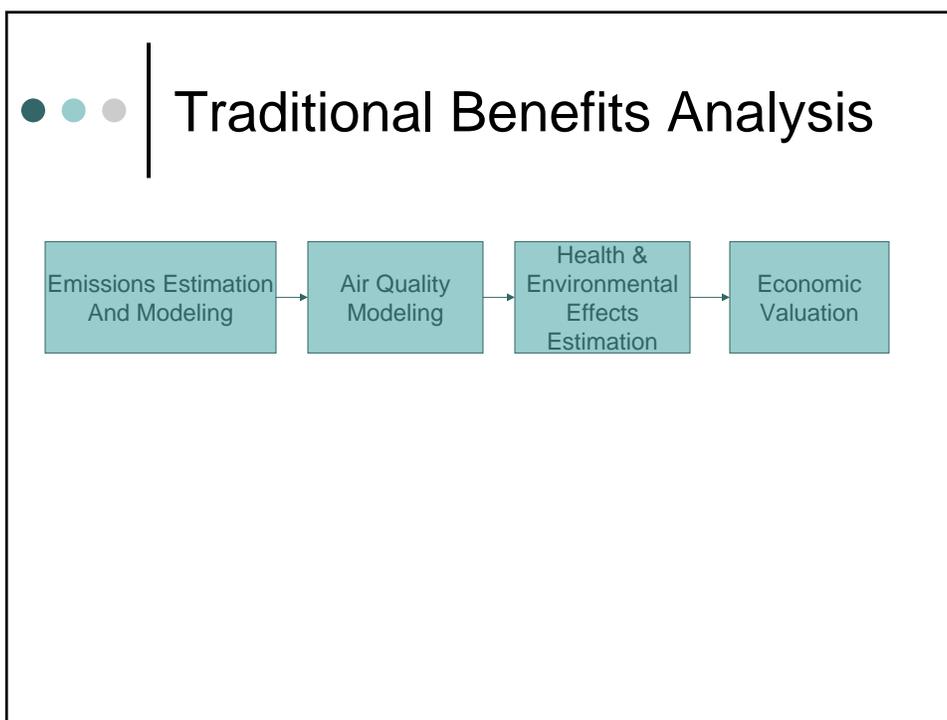


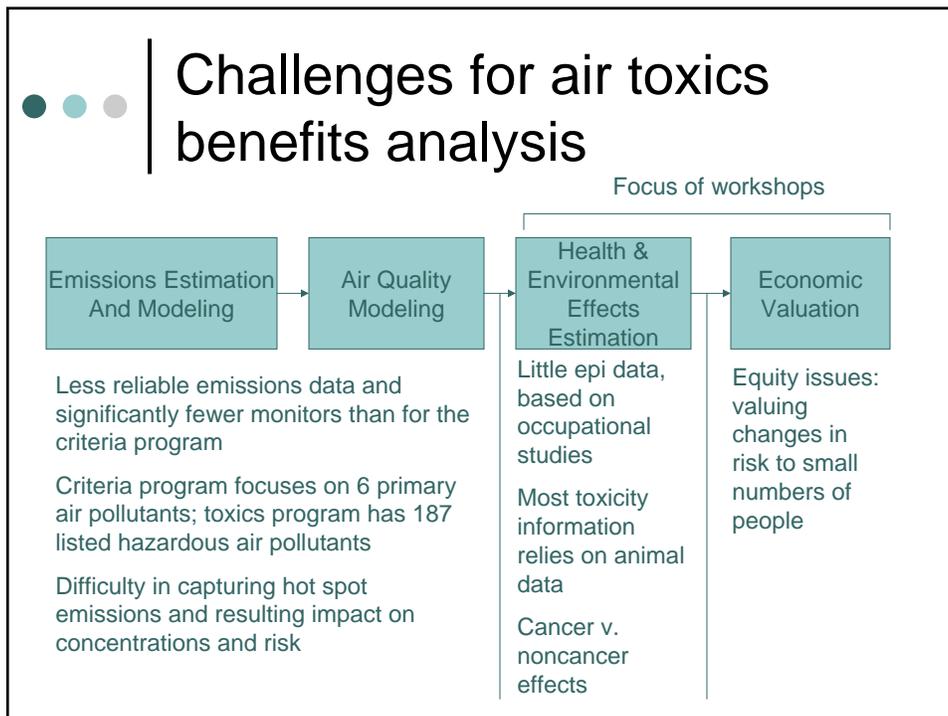
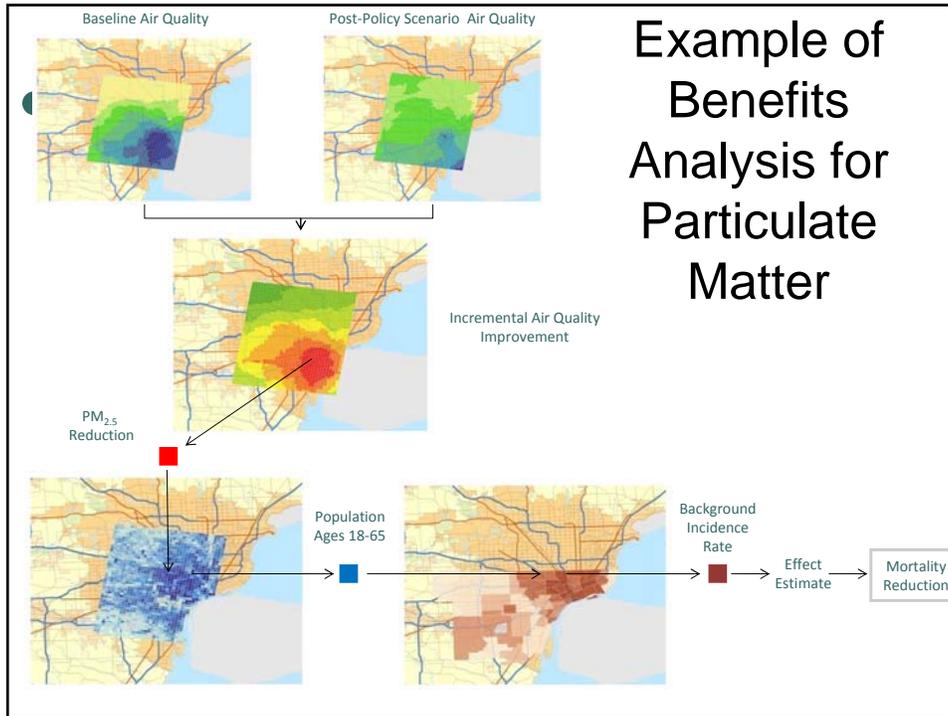
## Background on Estimating Air Toxics Benefits:

2000 Workshop Summary  
through EPA'S Draft Roadmap

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Workshop on Estimating Benefits of Reducing  
Hazardous Air Pollutants  
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# Background on Estimating Air Toxics Benefits





## 2000 Joint EPA/SAB Workshop

- Brought together risk assessors and economists to focus on developing dose-response information for use in economic analysis
- Highlighted complexity of integrating economics and risk assessment data to develop benefits assessment – pollutant-specific case studies (e.g., benzene, manganese)
- Outlined potential alternative approaches to benefits assessment
- Recommended focusing on aggregated benefits rather than individual toxics benefits
- Raised question of accounting for equity concerns when looking at population risks



## 2000 Workshop

- No consensus on proposed methodologies
- Discussions on alternatives to criteria pollutant analysis:
  - Insurance policy
  - Public valuation of risk reductions
  - Value of avoiding entry into risk pool or shifts in the curve of population's onset of disease
- Suggested Research Directions
  - Continue to address toxics using damage function approach
  - Alternative approaches, including
    - Value of bundling HAP reduction efforts, approach discussed in manganese case study and insurance concept



## History of Air Toxics Benefits Estimation at EPA

- Section 812 of Clean Air Act requires EPA to evaluate costs and benefits of federal air programs. Two previous 812 studies included limited analysis of air toxics
  - Retrospective: benefits from three Hazardous Air Pollutants (HAPs) criticized by Science Advisory Board (SAB) for overestimation
  - First Prospective: looked at costs only
- SAB recommended in June 2001 case study of benefits of control of a single, non-reactive, data-rich HAP such as benzene – draft now complete



## History of Air Toxics Benefits Estimation at EPA, continued

- Benefits for air toxics regulations often based on co-benefits from particulate matter and ozone
- SAB reviewed the 1996 NATA in 2001 and concluded “current exposure methodology and results... are not ready for use in the national scale benefits analysis” for 812. Since then, we have:
  - Improved HAPEM to estimate broader distribution of exposure in the population
  - Expanded our coverage to include many more pollutants (we now cover 183 out of 187 HAP)
  - Improved the resolution of large point source impacts from the census tract to the census block level
  - Improved the characterization of background pollution levels
  - For the 2005 assessment, we will be looking into improving our characterization of photochemically reactive pollutants (including formaldehyde and 1,3-butadiene) and pollutants that deposit from the atmosphere (including mercury)



## Recent efforts on benefits estimation: Today's Panel Discussions

- Benzene Case Study – life-table approach to estimating benefits of reducing leukemia cases from benzene exposure
- Lead Regulatory Impact Analysis – benefits of avoiding IQ point loss
- Acrolein Paper – developed dose-response function for noncancer effects (changes in lung function)
- Toluene Acute Effects – developed dose-equivalence relationships between toluene and ethanol to estimate costs of intoxication
- NAS Science and Decisions Report – recommendations on a unified dose-response assessment (cancer and noncancer)
- Changing Environmental Quality on Community Composition
- Efficiency/Equity Tradeoffs



## Recent Discussions Related to Executive Order 12866

- President Obama has asked Agencies for a comprehensive review of EO 12866
  - Current EO focuses on maximizing net benefits
  - Requires cost-benefit analysis for major rules
- Status of Review
  - 170 public comments posted to OMB's website so far
  - Agencies' recommendations to the President by 5/10/09



## EPA's Draft Roadmap

- Discussion of near-term options – focus of workshop
  - Today: Presentation on EPA's priority air toxics
  - Tomorrow: Presentation on near-term options for estimating benefits, including:
    - Describing air toxics benefits qualitatively;
    - Using existing methodologies to sketch out minimum benefits from a national perspective;
    - Using NATA or other tools to pursue national, regional or local analysis focusing on reduction of individual risk levels;
    - Estimating benefits of air toxic reductions in conjunction with criteria air pollution program; and
    - Expanding benefits assessment efforts to include equity considerations
- Discussion of longer-term options
  - Tomorrow: Presentation on issues for considerations for longer-term approaches