Research Results and Science-Based Decision Making at the EPA

U.S. EPA’s Office of Research and Development

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“My Administration will value science, we will make decisions based on the facts, and we understand that the facts demand bold action.”

- President Barak Obama, 2008

“With science as our North Star – EPA has steered America away from health risks, and toward healthier communities and a higher overall quality of life.”

- EPA Administrator Gina McCarthy, Remarks at the National Academy of Sciences, April 28, 2014
EPA scientists work on the most challenging issues impacting public health and environmental science:

- Energy (Hydraulic Fracking)
- Climate Change
- Water Quality
- Agriculture
- Chemical Safety
ORD Research Priorities

• A systems approach to environment and public health
• Integration of social sciences
• Ensuring healthy communities
• Chemical safety and Risk assessment
• Safe and sustainable water
• Scientific support and crisis response
• Maintain a strong long-term research capacity and workforce for the future
Resource Trends
ORD Budget by Type of Spending

- Personnel Compensation & Benefits
- Operating Expenses
- Extramural (STAR)
- Extramural (Non-STAR)
- Earmarks

Dollars in Millions


President's Budget
Projected

$512.0M
Challenges

• Quick answers for high visibility issues
• Maintain long-term research vision
• Maintain standards for scientific excellence
• Respond to widely diverse stakeholders
• Integration of social sciences
• Media coverage
• Everyone is a peer reviewer
EPA Study Finds Fracking Contaminated Drinking Water (NRDC Switchboard)

EPA: Fracking Doesn’t Affect Groundwater (Cato Institute Blog)

Jim Inhofe Brings a Snowball to the Senate Floor to Prove Climate Change is a Hoax (Huffington Post)

97 percent of scientific studies agree on manmade global warming, so what now? (Washington Post)

The World Health Organization's research arm declares glyphosate a probable carcinogen (Scientific American)

EU food safety watchdog hits back at scientists in glyphosate row (Reuters)
A Day in the Life...
Science Questions

- Is it safe to play on Artificial Turf?
- Does Hydraulic Fracturing impact drinking water resources?
- What are the impacts of climate change on public health?
- Does __________ cause cancer?
- How much certainty do you need to make science-based policy decisions?
Essential Ingredients for Credible Science for Decision Making

- Ask the right questions (problem formulation)
- Get the right experts involved (systems approach)
- Ensure transparency and public engagement (stakeholders)
- Pay attention to methods and analyses
- Present data so it is understandable to decision makers and the public (decision tools)
- Peer review – I mean it!
- Communication and evaluation
Importance of the SAB

• Ensures that EPA science is done right

• Provides the scientific community and the general public opportunities for input into EPA science

• Helps EPA identify and tackle the science challenges of today and of tomorrow

• Helps to ensure public trust in EPA science (process and results)
EPA and the SAB

• EPA and the SAB are amazing places to do science

• Challenges to agency science underscore the need for scientists to be responsive to policy challenges

• Application and credibility of our science depends upon getting the science right

• EPA is committed to moving forward with scientific integrity, transparency, and better science-based decisions