



Research Results and Science-Based Decision Making at the EPA

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

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Science at EPA

“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 Science

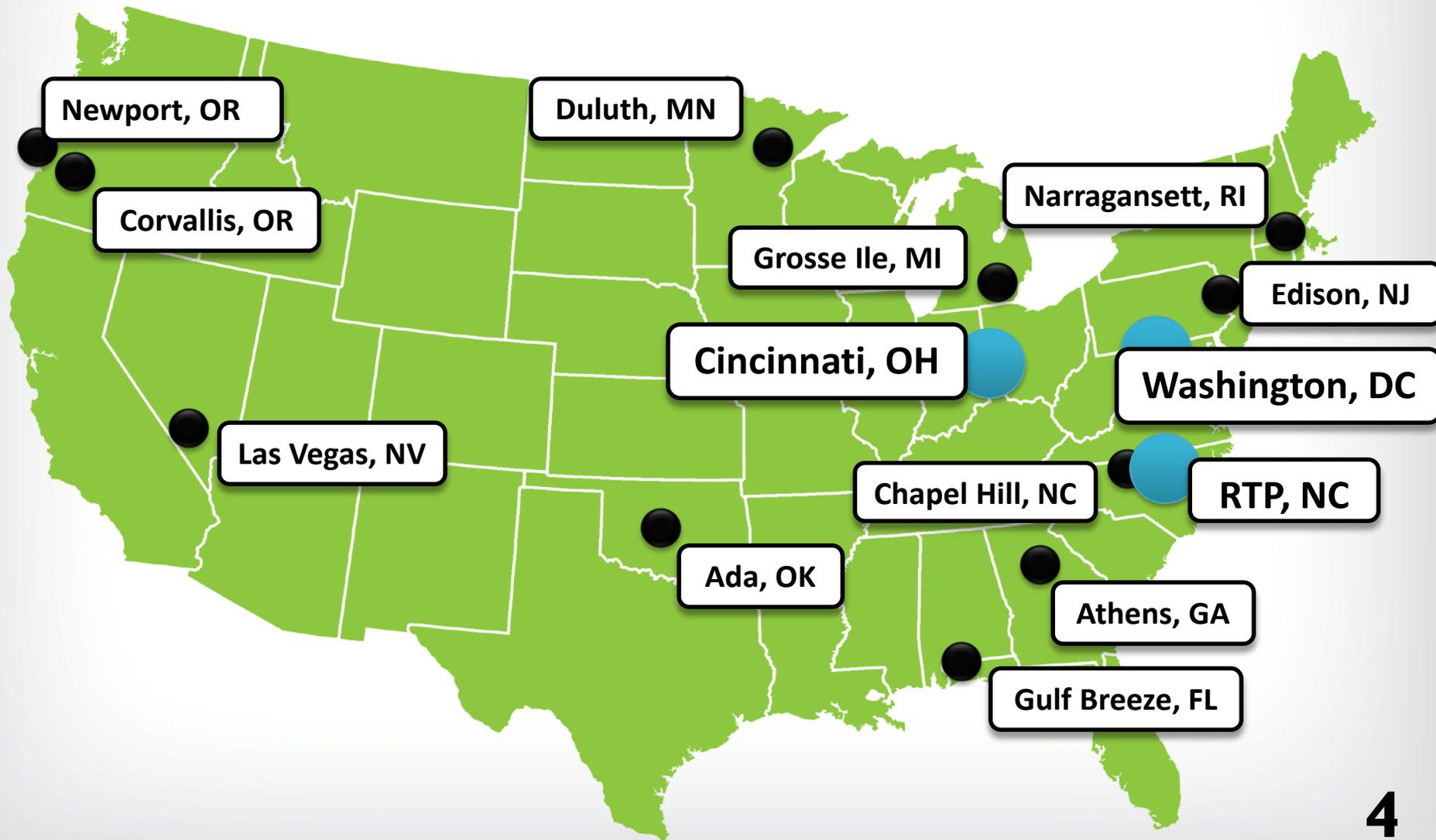
EPA scientists work on the most challenging issues impacting public health and environmental science:

- **Energy (Hydraulic Fracking)**
- **Climate Change**
- **Water Quality**
- **Agriculture**
- **Chemical Safety**





ORD Research Facilities





U.S. EPA Organizational Chart

Immediate Office of the Assistant Administrator

Tom Burke, Deputy Assistant Administrator
Lek Kadeli, Principal Deputy Assistant Administrator
Robert Kavlock, Deputy Assistant Administrator for Science

- Innovation – **Peter Preuss**
- Communications – **Carolyn Hubbard (Acting)**

Office of the Science
Advisor
Tom Sinks

National Program Directors

- Air, Climate & Energy – **Dan Costa**
- Safe and Sustainable Water Resources – **Suzanne van Drunick**
- Sustainable and Healthy Communities – **Michael Slimak**
- Chemical Safety for Sustainability – **Tina Bahadori**
- Human Health Risk Assessment – **John Vandenberg**
- Homeland Security – **Greg Sayles**

Office of
Administrative and
Research Support
Pai-Yei Whung (Act.)

Office of Scientific
Information and
Management
Jerry Blancato

Office of Program
Accountability
and Resource
Management
Amy Battaglia

Office of Science
Policy
Fred Hauchman

National Health and
Environmental Effects
Research Laboratory
Bill Benson (Act.)

National Exposure
Research Laboratory
**Jennifer
Orme-Zavaleta**

National Center for
Environmental
Assessment
Kenneth Olden

National
Risk Management
Research Laboratory
Cindy Sonich-Mullin

National Center for
Environmental
Research
James Johnson

National Homeland
Security Research
Center
Greg Sayles

National Center for
Computational
Toxicology
Russell Thomas



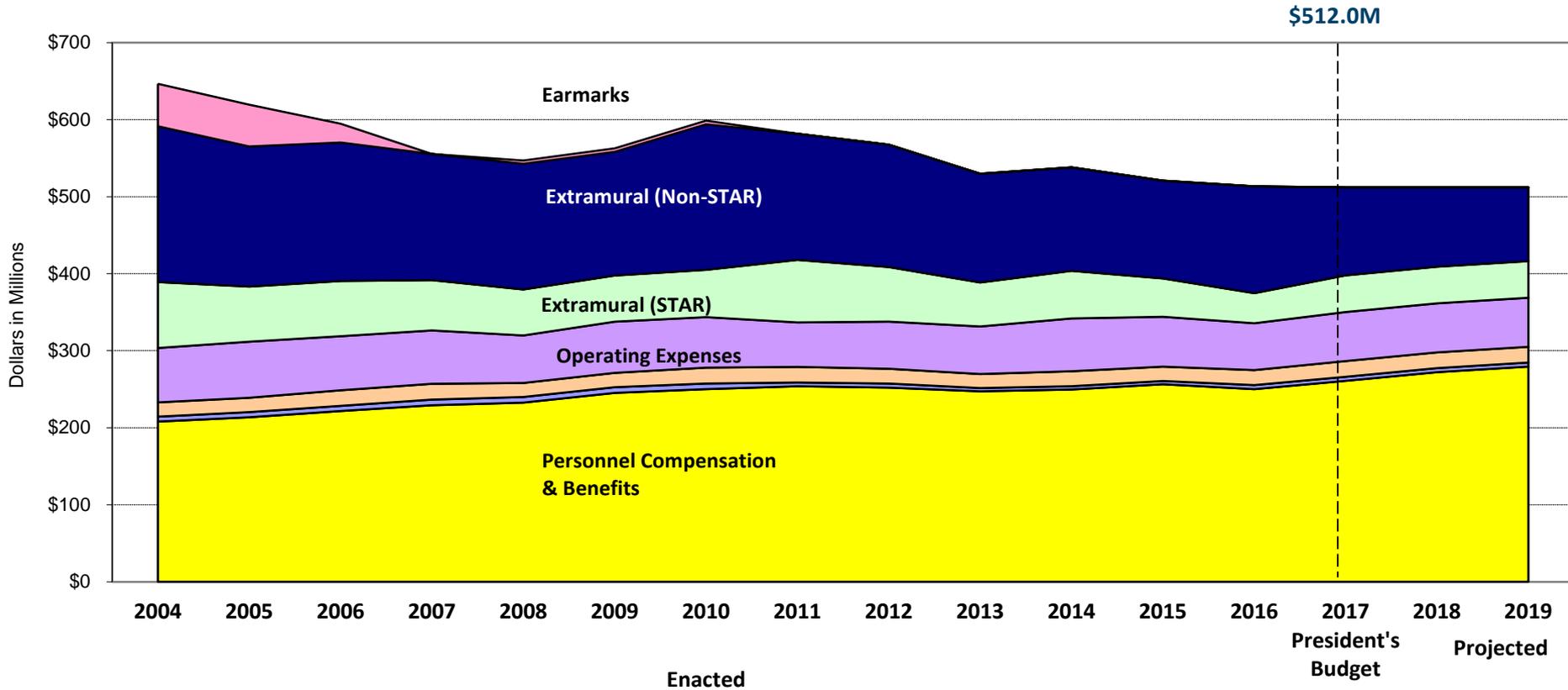
ORD Research Priorities

- 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



- 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



Messaging and the Media

- ***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**