

The Administrator's Priorities and the Role of Science

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Administrator's Guiding Principles

Science must be the backbone for EPA programs.

EPA must follow the rule of law.

EPA's actions must be transparent.



Administrator's Priority Issues

Reducing greenhouse gas (GHG) emissions

Improving air quality

Managing chemical risks

Cleaning up hazardous-waste sites

Protecting America's water

Expanding the conversation on environmentalism

Recent EPA Accomplishments

Reducing GHG Emissions

- Mandatory GHG Reporting: EPA is using its Clean Air Act authority to mandate emissions reporting by sources of GHGs. The main final rule will be published in the Federal Register within the next couple weeks for data to be collected starting in 2010, and EPA is ambitiously working on additional source categories that were not included in that final rule so that they can be finalized in time for data collection to begin in 2011.
- GHG Endangerment Finding: EPA expects to issue a final finding as to whether GHGs endanger public health and welfare under the Clean Air Act by the end of the year. This will respond to the Supreme Court's 2007 decision that EPA has the authority to regulate GHGs from motor vehicles.
- Clean Car Program: In late summer, EPA announced its clean car program that is designed to keep more than 950 million tons of CO₂ out of the atmosphere. This action represents the first ever national greenhouse gas emissions standards for vehicles.

Recent EPA Accomplishments (2)

Improving Air Quality

- New NAAQS Process: EPA has reintroduced the development of a staff-level document for policy assessment. This new document will lay out the policy-relevant science from the integrated science assessment, the results of the risk and exposure assessment, and staff recommendations for whether, and if so how, to revise the standard. CASAC will review the document before its final publication.
- PM and Ozone Standards: EPA has accelerated its ongoing review of the PM NAAQS and is reconsidering the 2008 ozone NAAQS on the basis of the record from the last review. EPA plans to issue final rules in 2010 and 2011.
- Monitoring Air Toxics Near Schools: EPA has embarked on a program to measure concentrations of air toxics near schools thought to be at greatest risk. As results from these monitoring programs become available, EPA is posting them on the internet.

Recent EPA Accomplishments (3)

Managing Chemical Risks

- Toxic Substances Control Act (TSCA) Reform: The Administrator has announced a set of principles that will guide reform of TSCA, resulting in the application of a risk-based standard for chemical reviews, strengthening EPA's ability to collect data and take action once risks are identified, and promoting "green" innovations and sustainability.
- New Integrated Risk Information System (IRIS) Process: In May 2009, EPA announced reforms to the IRIS assessment-development process to ensure its scientific quality, integrity, transparency, and timeliness. For example, written interagency comments are now made available to the public. All IRIS assessments continue to undergo independent, external peer review as well as public comment.
- PCBs in Buildings: EPA has announced guidance to communities, school administrators, and others to reduce exposures to PCBs from caulk in buildings (generally those built after 1978 do not contain PCBs in caulk). EPA will also conduct research to improve our understanding of exposures to children and others in school settings, and to identify mitigation measures.

Recent EPA Accomplishments (4)

Cleaning Up Hazardous Waste Sites

- Coal Ash: The Administrator has committed to publishing a proposed rule by the end of this year that will address the management of coal combustion residuals (CCRs) from electric utilities and is expected to include on-site inspections and assessments of the structural integrity of CCR impoundments.
- Dioxin Science Plan: EPA determined that it needed to accelerate its work underway to reassess the human health risks from exposures to dioxin. EPA's *Science Plan for Activities Related to Dioxins in the Environment* (2009) details a plan for completion of the Agency's dioxin reassessment by the end of 2010.

Recent EPA Accomplishments (5)

Protecting America's Waters

- Reducing Nutrient Impacts: EPA recently published a report entitled *An Urgent call to Action: Report of the State-EPA Nutrient Innovations Task Force Group*. It evaluates the scope of nutrient impacts and recommends innovative ways to address nutrient pollution.
- Assessing Pharmaceuticals and Personal Care Products (PPCPs): EPA produced a strategy for assessing PPCPs in water, which includes strengthening the science, improving public understanding, building partnerships, and taking actions as appropriate.
- Improving the Safety of America's Drinking Water: EPA has developed a treatability database and conducted demonstration projects to enable water utilities to improve the quality of drinking water with an emphasis on helping small communities reduce the levels of arsenic.
- Protecting Oceans and Coastal Waters: EPA is participating in the newly established Interagency Ocean Policy Task Force charged with developing recommendations for national policy that ensure protection of our oceans, coasts, and Great Lakes.
- Addressing Climate Change and Water: EPA is working to implement its *National Water Program Strategy: Response to Climate Change*. The strategy includes 44 key actions designed to mitigate and adapt to climate change water impacts.



EPA Science Policy Council (SPC) Science Priorities

Climate and Energy

Environmental Contaminants

Homeland Security and Emergency Response

Modernization of (Water) Infrastructure

Priorities and ORD Research Programs at a Glance

Administrator's Priorities

- Reducing GHG Emissions
- Improving Air Quality
- Managing Chemical Risks
- Cleaning Up Hazardous-Waste Sites
- Protecting America's Water
- Expanding Environmentalism

SPC Science Priorities

- Climate and Energy
- Environmental Contaminants
- Homeland Security and Emergency Response
- Modernization of Infrastructure

ORD Research Areas

- Air
- Drinking Water
- Water Quality
- Land Preservation and Restoration
- Safe Pesticides and Products
- Homeland Security
- Human Health
- Ecosystem Services
- Human Health Risk Assessment
- Global Change / Mercury
- Endocrine Disrupting Chemicals
- Computational Toxicology
- Nanotechnology
- Science and Technology for Sustainability

Strategic Research Directions: Ecosystem Services

- **Exemplary Accomplishments**
 - Inventorying, mapping, and modeling ecosystem services nationwide, e.g., working with the National Geographic Society to disseminate ecosystem service maps
 - Conducting Community-Based Demonstration Projects: Midwestern Landscapes, Tampa Bay, Willamette River, and Coastal Carolina
- **Strategic Direction Highlights**
 - Developing pollutant-specific studies, e.g., effects of nitrogen on ecosystem services
 - Developing ecosystem-specific studies, e.g., wetlands and coral reefs
 - Planning a pilot study with OW, NCEE, and Region 3 to illustrate an ecosystem services approach to examining management alternatives for the Chesapeake Bay
 - Developing a public-private research partnership on ecosystem services (initial meeting attended by 40+ representatives from multiple sectors)
 - Follow-up underway to create an organizational structure
 - Early activities: Clearinghouse function for ecosystem services information and synthesis of research activities

Strategic Research Directions: Nanotechnology

- **Exemplary Accomplishments:**

- Developed EPA Nanomaterial Research Strategy
- Leveraging interagency and international research on the implications of nanomaterials
 - Carbon nanotubes with the National Institute of Environmental Health Sciences (NIEHS) and the National Institute for Occupational Safety and Health (NIOSH)
 - Silver with the Consumer Product Safety Commission (CPSC) and NIOSH
 - Carbon tubes and fullerenes, cerium oxide, iron, silver, and titanium oxide with the Organization for Economic Cooperation and Development (OECD)

- **Strategic Direction Highlights:**

- Continuing to focus on fate, transport, transformation, and exposure with regard to five nanomaterial types (Ag, C, CeO, TiO₂, Fe)
- Increasing emphasis on targeted effects, based on source-to-dose findings
- Integrating ToxCast into in-house program
- Increasing emphasis on green nanotechnology from a life-cycle perspective

Groupings for the Breakout Sessions

- Ecosystems, Water Quality, and Drinking Water
- Human Health, Human Health Risk Assessment, Endocrine Disrupting Compounds, Safe Pesticides / Safe Products, Computational Toxicology, Nanotechnology
- Land Preservation, Homeland Security, Global Earth Observation System of Systems (GEOSS)
- Air, Global, Sustainability, Economics and Decision Sciences

Charge Questions for the Breakout Sessions

- The intent is to discuss the current portfolio of research programs within the context of the Administrator's priorities and the environmental issues facing EPA.
- Charge for the breakout sessions:
 - How do the research programs balance national problems with Agency programmatic needs?
 - What is the right "mix" of national vs. Agency focus (if in fact this is an actual dichotomy)?
 - How can each program's key strengths be leveraged (across other ORD and EPA programs, and with non-EPA programs) to improve synergies and provide the best information to support decisions?
 - What is the best path forward for building additional areas of ORD strength?