



United States Environmental Protection Agency/ Office of Research and Development's Science Agenda

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EPA ORD*

2021 NACAA Virtual Fall Membership Meeting
October 20, 2021



Executive Orders/ Memorandums



BRIEFING ROOM

Executive Order On Advancing Racial Equity and Support for Underserved Communities Through the Federal Government

JANUARY 20, 2021 • PRESIDENTIAL ACTIONS

“It is therefore the policy of my Administration that the Federal Government should pursue a comprehensive approach to advancing equity for all, including people of color and others who have been historically underserved, marginalized, and adversely affected by persistent poverty and inequality. Affirmatively advancing equity, civil rights, racial justice, and equal opportunity is the responsibility of the whole of our Government. Because advancing equity requires a systematic approach to embedding fairness in decision-making processes, executive departments and agencies (agencies) must recognize and work to redress inequities in their policies and programs that serve as barriers to equal opportunity.”

[Executive Order 13985 On Advancing Racial Equity and Support for Underserved Communities Through the Federal Government](#)



BRIEFING ROOM

Executive Order on Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis

JANUARY 20, 2021 • PRESIDENTIAL ACTIONS

“...Federal Government must be guided by the best science and be protected by processes that ensure the integrity of Federal decision making...”

“To that end, this order directs all executive departments and agencies to immediately review and, as appropriate and consistent with applicable law, take action to address the promulgation of Federal Regulations and other actions during the last 4 years that conflict with these important national objectives...”

[Executive Order 13990 - Protecting Public Health and Restoring Science to Tackle the Climate Crisis](#)



BRIEFING ROOM

Memorandum on Restoring Trust in Government Through Scientific Integrity and Evidence-Based Policymaking

JANUARY 27, 2021 • PRESIDENTIAL ACTIONS

“It is the policy of my Administration to make evidence-based decisions guided by the best available science and data. . . . Scientific findings should never be distorted or influenced by political considerations. When scientific or technological information is considered in policy decisions, it should be subjected to well-established scientific processes, including peer review where feasible and appropriate, with appropriate protections for privacy. Improper political interference in the work of Federal scientists or other scientists who support the work of the Federal Government and in the communication of scientific facts undermines the welfare of the Nation, contributes to systemic inequities and injustices, and violates the trust that the public places in government to best serve its collective interests.”

[Memorandum on Restoring Trust in Government Through Scientific Integrity and Evidence-Based Policymaking](#)



BRIEFING ROOM

Executive Order on Tackling the Climate Crisis at Home and Abroad

JANUARY 27, 2021 • PRESIDENTIAL ACTIONS

“It is the policy of my Administration that climate considerations shall be an essential element of United States foreign policy and national security. The United States will work with other countries and partners, both bilaterally and multilaterally, to put the world on a sustainable climate pathway. The United States will also move quickly to build resilience, both at home and abroad, against the impacts of climate change that are already manifest and will continue to intensify according to current trajectories.”

[Executive Order 14008 on Tackling the Climate Crisis at Home and Abroad](#)



ORD Organization



ORD at a Glance

Who We Are

- EPA's Office of Research and Development (ORD) is the world's premier environmental health research organization.
- ORD conducts research, providing the foundation for credible decision making to protect human health and the environment

Our Mission

To provide the best available environmental science and technology to inform and support human health and environmental decision making at the federal, state, tribal, and local levels, addressing critical environmental challenges and anticipating future needs through leading edge research.



ORD Research

ORD provides the scientific foundation for EPA to execute its mandate to protect human health and the environment.

1. **Longer-Term Research:** Conducts *innovative and anticipatory* research addressing a range of EPA program and regional needs to identify and solve longer term environmental challenges.
2. **Research for Statutory Requirements and Current Environmental Challenges:** ORD scientists and engineers conduct research to support Agency priorities as well as to assist states, tribes, and communities address *environmental challenges*.
3. **Responsive Technical and Emergency Support:** Because of our expertise, local, state, and national officials come to us for technical support to *respond to environmental crises and needs*, large and small.



Science to Support EPA's Mission

ORD's leading-edge research informs Agency decisions and supports the emerging needs of EPA stakeholders, including state, tribal, and community partners.

EPA Mission

Protect human health and the environment

Program Offices

(Air, Water, Waste,
Chemicals)

*Policies, Regulations,
National Decisions*



ORD

Scientific Foundation



Regional Offices

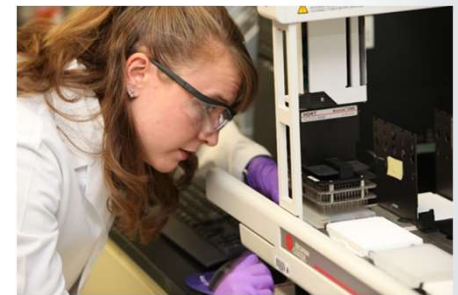
*Interface
with States, Tribes, &
Communities*



Science Highlights

ORD is engaged in EPA's highest priority environmental issues

- Understand and mitigate the impacts of climate change's centrality to air issues and increase the resilience of communities and the environment.
 - Focus on Wildfire Smoke and approaches that can be used by communities and individuals to reduce exposure
 - Looking towards new issues
 - Blue carbon uptake
 - Benefits and consequences of large-scale energy transition
- Increase our understanding of how health disparities can arise from unequal environmental conditions and pollution exposures through environmental justice research.
 - Creation of the Environmental Justice Executive Lead position
 - Climate/ Air Quality/ Environmental Justice workshop that included keynotes by outside Environmental Justice experts
 - Approaches that begin with community engagement and participation (e.g. ASPIRE)
- Contaminants of Immediate and Emerging Concern
 - Continue efforts to address need for air measurement and monitoring methods for hazardous air pollutants
 - Improve understanding of effectiveness and potential issues related to removal and destruction approaches

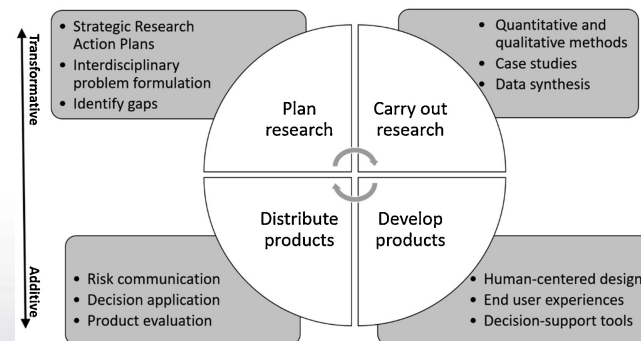




Science Highlights Cont.

ORD is engaged in EPA's highest priority environmental issues

- Applying emergency response expertise to address key research needs, for example SARS-CoV-2, the virus that causes **COVID-19**
- Providing information and tools the Agency, states, tribes, and utilities can use to reduce **lead** exposures in communities.
- Supporting EPA's decisions by characterizing impacts from stressors on human and ecological systems through multiple **assessment** programs.
- Action Oriented **Scientific Integrity** continued implementation
 - Revitalization of Scientific Advisory Board and Clean Air Scientific Advisory Committee (CASAC)
- National Program Directors commitment to cross-program integration for PFAS, EJ, and Climate Change
- **Cumulative** Impacts
 - [Cumulative Health Impacts at the Intersection of Climate Change, Environmental Justice, and Vulnerable Populations/Lifestages: Community-Based Research for Solutions Request for Applications \(RFA\)](#)
- Integration of **Social Sciences and Natural Sciences**
 - Development of Solutions-driven research pilots that integrate social sciences into all phases of research to solve complex environmental challenges

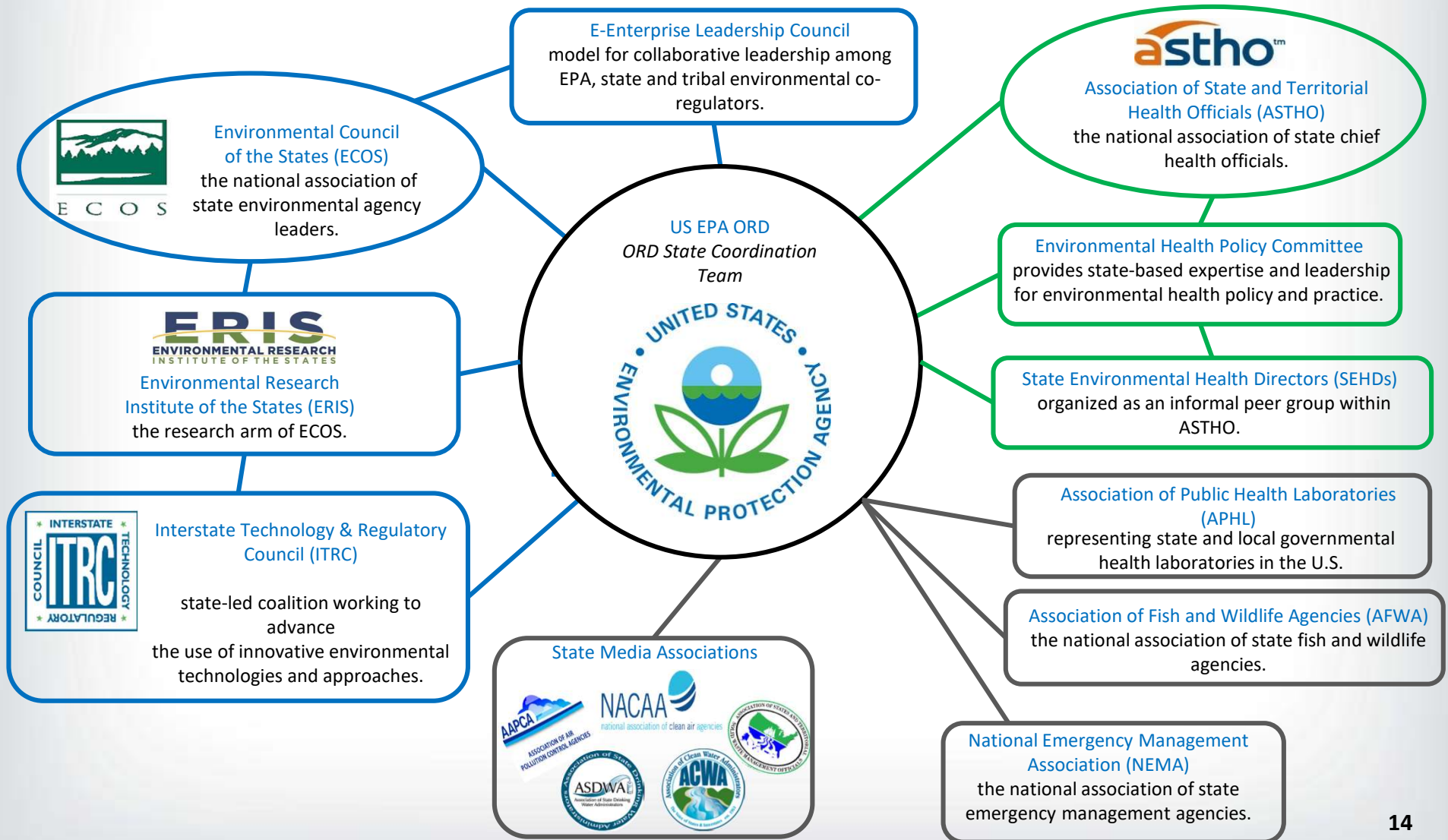




Communication and Engagement



Engagement with State Partners



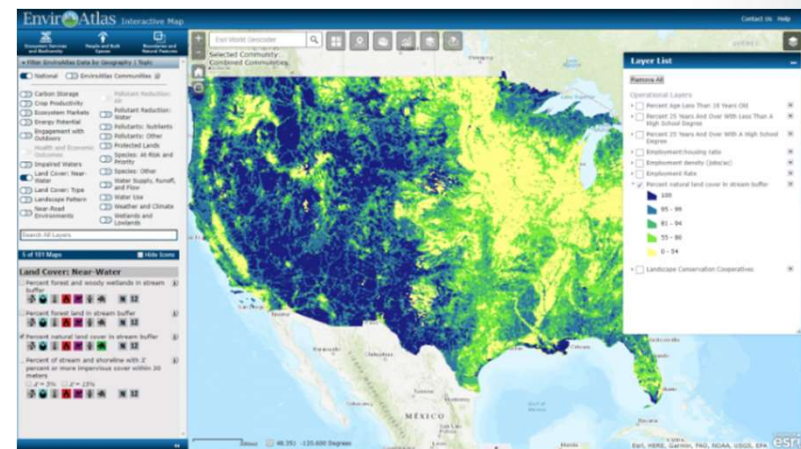


ORD Product Examples

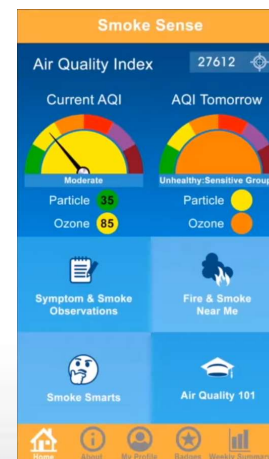
ORD produces high-quality, usable, and timely products tailored to meet and support partner needs.

Examples of ORD products include:

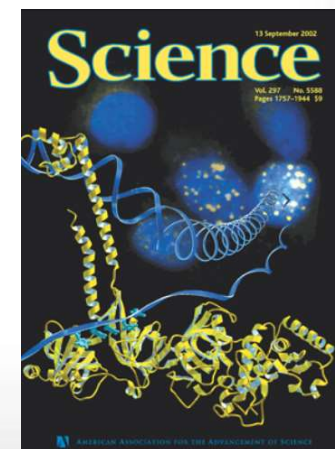
- Methods (e.g., analytical methods to test for PFAS)
- Models (e.g., CMAQ air quality model)
- Decision-support Tools (e.g., EnviroAtlas)
- Applications (e.g., SmokeSense mobile app)
- Databases (e.g., Comptox, ECOTOX)
- Peer-reviewed publications (e.g., scientific journals)



EnviroAtlas decision-support tool



Smoke Sense mobile app



Peer-reviewed journal

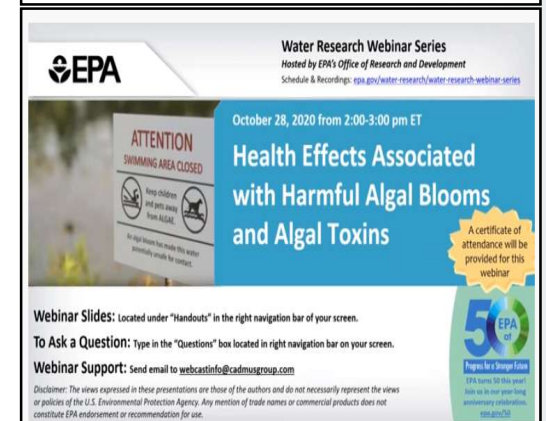


Communication

ORD translates and communicates research results and outcomes to partners, stakeholders, and the public.

Examples of ORD communications include:

- Science Matters Newsletter – ORD’s biweekly newsletter provides research updates, staff highlights, and upcoming events.
- Webinar Series – ORD hosts a suite of regular webinars across its research programs focused on research updates, tools and resources, and research applications.
- Social Media – ORD shares research updates, stories, and news with the public through social media.



Example webinar series





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<https://www.epa.gov/aboutepa/about-office-research-and-development-ord>