COMMITTEE ON
SCIENCE, SPACE AND TECHNOLOGY
CHAIRMAN BRIAN BABIN

SUBCOMMITTEE ON ENVIRONMENT

HEARING CHARTER

"Advancing Environmental Protection Through Science and Technology"

Thursday, June 4, 2026
10:00 a.m.
2318 Rayburn House Office Building

Purpose

The purpose of this hearing is to discuss and review the science and technology activities at the Environmental Protection Agency (EPA), including the new Office of Applied Science and Environmental Solutions, and how it relates to the Agency's long-term research and development efforts for emerging environmental concerns and the use of science in the Agency's regulatory decision-making processes.

Witness

- **Dr. Maureen Gwinn**, Deputy Associate Administrator for Science, Office of Applied Science and Environmental Solutions, Environmental Protection Agency

Background

The mission of the United States EPA is to protect human health and the environment.[1] The Agency leads national efforts to reduce environmental risks based on the best available scientific information.[2] EPA was created during the Nixon Administration by Reorganization Plan No. 3 of 1970 as a response to growing public concern over widespread environmental pollution and frustration with the fragmented approach to environmental protection. It was formed to consolidate environmental responsibilities from across the Federal government, including from the Departments of Interior, Agriculture, and Health, Education, and Welfare.[3] From the outset, a majority of research and development (R&D) activities at the Agency were concentrated in a single program office, the Office of Research and Development (ORD). This included laboratories, facilities, and other resources fundamental to providing the scientific rationale

[1] U.S. Envtl. Prot. Agency, *Our Mission and What We Do*, https://www.epa.gov/aboutepa/our-mission-and-what-we-do.
[2] *Id.*
[3] Reorganization Plan No. 3 of 1970, 5 U.S.C. app.

underpinning EPA's mission to protect human health and the environment.

In the late 1970s, Congress passed a series of Environmental Research, Development, and Demonstration Authorization Acts (ERDDAAs) explicitly authorizing appropriations for the Agency's R&D activities and providing direction on research planning and priorities within EPA.[4] For example, the 1978 ERDDA created the Agency's Science Advisory Board (SAB) to provide "independent advice and recommendations to the Administrator on the scientific and technical aspects of environmental issues."[5] The 1981 ERDDA directed the EPA Administrator to establish a separately identified program to conduct continuing and long-term environmental research and development.[6] It also included a mandate that 15% of EPA R&D funding be devoted to long-term research rather than just research to support regulatory responsibilities.[7]

In the last two decades, several reports raised concerns about the integrity and utility of R&D activities at EPA, particularly within ORD. These include several Government Accountability Office and National Academy of Sciences (NAS) reports that reviewed EPA's Integrated Risk Information System (IRIS) program, its use of the Science Advisory Board, and the problems arising from the separation and isolation of ORD from the scientific needs of the Agency. One recent NAS report noted that EPA needed to expand its R&D planning process to allow for greater stakeholder involvement, promote greater consistency in its approach to research design, adopt an approach to research collaboration that fosters innovation, and improve its scientific communication skills and tools.[8] While the Agency attempted to respond to criticism over the years, the fundamental structure of how EPA conducted its R&D activities had not changed substantially in the last half century.

The Office of Applied Science and Environmental Solutions

In May 2025, the EPA announced a major reorganization plan that would integrate scientific staff from ORD into the regulatory program offices for Air and Radiation, Water, Chemical Safety and Pollution Prevention, and Land and Emergency Management.[9] The remaining staff of ORD would be transferred to a new Office of Applied Science and Environmental Solutions (OASES) to "align research and put science at the forefront of the agency's rulemakings and technical assistance to states."[10]

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[4] Jerry H. Yen, *EPA's Proposed Reorganization of Its Office of Research and Development*, (Aug. 26, 2025), https://www.congress.gov/crs_external_products/IN/PDF/IN12599/IN12599.2.pdf.
[5] Environmental Research, Development, and Demonstration Authorization Act of 1978, Pub. L. No. 95-155, § 6(a), 91 Stat. 1257, 1259 (1977) (codified as amended at 42 U.S.C. § 4363).
[6] Environmental Research, Development, and Demonstration Authorization Act of 1981, Pub. L. No. 96-569, 94 Stat. 3335 (1980) (codified as amended at 42 U.S.C. § 4363).
[7] *Id.*
[8] National Academies of Sciences, Engineering, and Medicine. 2023. Transforming EPA Science to Meet Today's and Tomorrow's Challenges. Washington, DC: The National Academies Press.
National Academies of Sciences, Engineering, and Medicine. 2023. Transforming EPA Science to Meet Today's and Tomorrow's Challenges. Washington, DC: The National Academies Press. https://doi.org/10.17226/26602.
[9] *EPA Announces Next Phase of Organizational Improvements to Better Integrate Science into Agency Offices, Deliver Clean Air, Land, and Water to All Americans*, US EPA (May 2, 2025), https://www.epa.gov/newsreleases/epa-announces-next-phase-organizational-improvements-better-integrate-science-agency.
[10] Jerry H. Yen, *EPA's Proposed Reorganization of Its Office of Research and Development*, (Aug. 26, 2025), https://www.congress.gov/crs_external_products/IN/PDF/IN12599/IN12599.2.pdf.

OASES, located within the Office of the Administrator,[11] is intended to support the development, coordination, and application of scientific research across the EPA by focusing on applied, solution-oriented projects that align with the needs of EPA program and regional offices, including work related to emerging issues and regulatory priorities.[12] This collaboration with regulatory program offices is designed to ensure that research aligns with regulatory needs and current scientific knowledge.[13] OASES is structured to promote interdisciplinary collaboration with internal EPA partners and external organizations to support science-based approaches and the integration of scientific information into decision-making.[14]

OASES houses two science program management divisions and three applied research divisions. The Children's Health Protection Division works to address environmental factors affecting prenatal and childhood health through involvement in EPA rulemaking, policy development, enforcement actions, research, and the application of science focused on children's vulnerabilities.[15] The Science Engagement Division supports programs of the EPA's Science Advisor, provides science management functions for OASES, and leads several science partnerships and engagement programs for OASES and the EPA.[16]

OASES also includes three applied research divisions: the Applied Science and Environmental Methods Division, the Coastal Science Solutions Division, and the Environmental Solutions Division.[17]

Science Advisory Board

The SAB was established to provide outside and independent scientific advice to the EPA Administrator, and to review the quality and relevance of the scientific and technical information used by the Agency.[18] The SAB currently includes 37 members, primarily from universities, with additional representatives from industry, nonprofit organizations, and state or local entities.[19] The SAB maintains several standing committees, including the Agricultural Science Committee, Chemical Assessment Advisory Committee, Drinking Water Committee, Economic Analysis Committee, and Radiation Advisory Committee.[20] The SAB charter is renewed every two years per the Federal Advisory Committee Act (FACA).[21]

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[11] U.S. Envtl. Prot. Agency, *Organization Chart for the Office of the Administrator*, https://www.epa.gov/aboutepa/organization-chart-office-administrator.
[12] U.S. Envtl. Prot. Agency, *About the Office of Applied Science and Environmental Solutions*, https://www.epa.gov/aboutepa/about-office-applied-science-and-environmental-solutions.
[13] *Id.*
[14] *Id.*
[15] *Id.*
[16] *Id.*
[17] *Id.*
[18] Environmental Research, Development, and Demonstration Authorization Act of 1978, Pub. L. No. 95-155, § 8(a), *91 Stat.* 1257, 1260 (1977).
[19] U.S. Envtl. Prot. Agency, Tier 1 Members (Science Advisory Board—Board Committee), https://sab.epa.gov/ords/sab/r/sab_apex/sab/tier-1-members?p29_committeeon=Board&clear=29&session=5486089133974.
[20] *Current Committees and Panels*, Sci. Advisory Bd., U.S. Envtl. Prot. Agency, https://sab.epa.gov/ords/sab/r/sab_apex/sab/ccandpanels.
[21] *About the Science Advisory Board*, Sci. Advisory Bd., U.S. Envtl. Prot. Agency, https://sab.epa.gov/ords/sab/r/sab_apex/sab/aboutthesab#charter.

Under ERDDAA, when the EPA Administrator sends any proposed criteria document, standard, limitation, or regulation made under the authority of the Administrator, which includes all major environmental statutes, the Administrator must simultaneously provide the SAB with that proposal and all underlying scientific and technical information.[22] The SAB may then opt to offer advice on the scientific and technical adequacy of the proposal within a specified timeframe.[23]

The House Committee on Science, Space, and Technology has jurisdiction over all matters relating to environmental research and development.[24] The EPA is required by several statutes to use science to support the Agency's decision-making process.

Major Environmental Statutes

In addition to the ERDDAA statutes, the major environmental statutes that grant authority to the EPA to conduct research and development activities include the Clean Air Act (CAA),[25] the Safe Drinking Water Act (SDWA),[26] the Federal Water Pollution Control Act, also known as the Clean Water Act (CWA),[27] the Toxic Substances Control Act (TSCA),[28] the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA/Superfund),[29] the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA),[30] and the Resource Conservation and Recovery Act (RCRA).[31]

The Clean Air Act

Under the Clean Air Act (CAA), science is required for setting health-based air quality standards for stationary sources (such as factories, power plants, refineries, industrial operations, and large commercial/institutional facilities) and mobile sources (such as cars, trucks, aircraft, or ships). The CAA establishes federal minimum standards, which can be made even more stringent by state laws (with exceptions). The EPA is tasked with reviewing scientific data on pollutants, air quality, and emissions, which is largely carried out through modeling, risk assessments, and cost-benefit analyses.[32] This includes research on health effects and exposure science, atmospheric science, emissions-control technology research, and air quality monitoring.

The Safe Drinking Water Act

The Safe Drinking Water Act (SDWA) aims to regulate waters actually or potentially used for

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[22] Environmental Research, Development, and Demonstration Authorization Act of 1978, Pub. L. No. 95-155, § 8(c)(1), 91 Stat. 1263, 1266 (codified at 42 U.S.C. § 4365(c)(1)).
[23] Environmental Research, Development, and Demonstration Authorization Act of 1978, Pub. L. No. 95-155, § 8(c)(2), 91 Stat. 1263, 1266 (codified at 42 U.S.C. § 4365(c)(2)).
[24] *Rules of the House of Representatives*, Rule X, cl. 1(p) (2025).
[25] U.S. Envtl. Prot. Agency, *Clean Air Act Text*, https://www.epa.gov/clean-air-act-overview/clean-air-act-text.
[26] Safe Drinking Water Act, 42 U.S.C. §§ 300f–300j-27 (1974).
[27] Federal Water Pollution Control Act Amendments of 1972 (Clean Water Act), 33 U.S.C. §§ 1251–1387 (1972).
[28] Toxic Substances Control Act (TSCA), 15 U.S.C. §§ 2601–2629 (1976).
[29] Comprehensive Environmental Response, Compensation, and Liability Act *(*Superfund), 42 U.S.C. §9601 et seq. (1980)
[30] Federal Insecticide, Fungicide, and Rodenticide Act, 7 U.S.C. §136-136y
[31] Research Conservation and Recovery Act, 42 U.S.C. §6981
[32] U.S. Envtl. Prot. Agency, *The Clean Air Act: Solving Air Pollution Problems with Science and Technology*, https://www.epa.gov/clean-air-act-overview/clean-air-act-solving-air-pollution-problems-science-and-technology.

drinking, including above and underground sources.[33] The SDWA authorizes the EPA to establish minimum standards to protect such water and requires all owners or operators of public water systems to comply with the health-related standards.[34] These standards are based on research related to the human health effects of drinking-water contaminants, including carcinogenicity, developmental toxicity, neurological effects, endocrine disruptors, and microbial diseases. The SDWA also requires that the EPA consider a detailed assessment and use the best available science when developing standards.[35] Other areas of research include drinking water treatment technology for filtration, disinfection, membrane technologies, corrosion control, contaminant removal, and advanced treatment systems.

The Clean Water Act

The Clean Water Act (CWA) establishes the basic regulatory structure for discharges of pollutants into the waters of the United States and for regulating quality standards for surface waters. [36] The CWA requires the EPA to develop surface water quality criteria that reflect the latest science on the impacts of pollutants on human health and the environment.[37] The CWA authorizes the EPA to conduct research into the causes and sources of water pollution, pollutant fate and transport, eutrophication, nutrient loading, sediment contamination, and aquatic ecosystem impacts. The Act also authorizes research into wastewater treatment technology for municipal wastewater treatment, industrial pretreatment, nutrient removal, sludge treatment, and advanced treatment systems.

The Toxic Substances Control Act

The EPA evaluates existing chemicals under the Toxic Substances Control Act (TSCA) using three stages, which include prioritization, risk evaluation, and risk management.[38] The EPA is required to meet the scientific standards under the Act, including using the best available science and ensuring decisions are based on the weight of scientific evidence.[39]

The Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), or Superfund, created a trust fund for cleaning up abandoned or uncontrolled hazardous waste sites. Hazardous waste sites are placed on a National Priorities List, after which a remedial investigation/feasibility study (RI/FS) is performed.[40] Research provisions authorize activities for hazardous substance assessment, environmental monitoring, toxicological research, health assessments, and remediation technology development.

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[33] U.S. Envtl. Prot. Agency, *Overview of the Safe Drinking Water Act*, https://www.epa.gov/sdwa/overview-safe-drinking-water-act.
[34] *Id.*
[35] Safe Drinking Water Act § 1412(b)(3)(A), 42 U.S.C. § 300g-1(b)(3)(A).
[36] U.S. Envtl. Prot. Agency, *Summary of the Clean Water Act (33 U.S.C. § 1251 et seq.)*, https://www.epa.gov/laws-regulations/summary-clean-water-act.
[37] U.S. Envtl. Prot. Agency, *Water Quality Criteria*, https://www.epa.gov/wqc.
[38] U.S. Envtl. Prot. Agency, *How EPA Evaluates the Safety of Existing Chemicals*, https://www.epa.gov/assessing-and-managing-chemicals-under-tsca/how-epa-evaluates-safety-existing-chemicals.
[39] U.S. Envtl. Prot. Agency, *How EPA Evaluates the Safety of Existing Chemicals: Overview*, https://www.epa.gov/assessing-and-managing-chemicals-under-tsca/how-epa-evaluates-safety-existing-chemicals.
[40] U.S. Envtl. Prot. Agency, *Superfund: CERCLA Overview*, (Sept. 22, 2025), https://www.epa.gov/superfund/superfund-cercla-overview.

The Federal Insecticide, Fungicide, and Rodenticide Act

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) authorizes the EPA to register pesticides for sale for preventing, destroying, repelling, or mitigating any pest, or intended to use as a plant regulator, defoliant, desiccant, or any nitrogen stabilizer.[41] Research activities include toxicology and human health effects research, ecological effects and ecotoxicology, environmental fate and transport, residue chemistry and exposure research, endocrine disruptor research, and spray drift and application technology research.

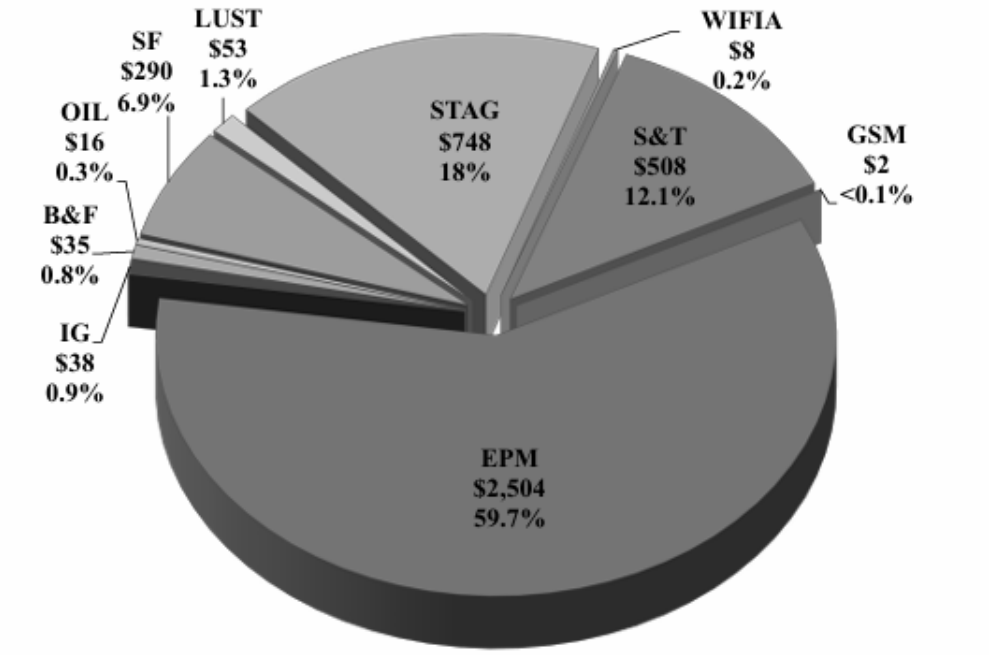
The Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act authorizes the EPA to manage solid and hazardous waste from "cradle-to-grave," including the generation, transportation, treatment, storage, and disposal of waste. It establishes a framework for states to implement effective solid waste and hazardous waste management programs.[42] Research authorized under this statute includes recycling technologies, materials recovery, waste separation, reuse systems, composting, energy recovery from waste, hazardous waste treatment technologies, incineration, stabilization and solidification research, thermal treatment, underground storage tank research, and research related to corrective action and remediation science.

[41] U.S. Envtl. Prot. Agency, *Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and Federal Facilities*, (Sept. 10, 2013), https://www.epa.gov/enforcement/federal-insecticide-fungicide-and-rodenticide-act-fifra-and-federal-facilities.

[42] U.S. Envtl. Prot. Agency, *Resource Conservation and Recovery Act (RCRA) Overview,* (Sept. 05, 2025), https://www.epa.gov/rcra/resource-conservation-and-recovery-act-rcra-overview

U.S. Environmental Protection Agency's
FY 2027 Budget by Appropriation
Total Agency: $4,203 Million
(Dollars in Millions)



Science & Technology (S&T)	Good Samaritan Mine Remediation Fund (GSM)
Environmental Programs & Management (EPM)	Inspector General (IG)
Buildings & Facilities (B&F)	Inland Oil Spill Programs (OIL)
Hazardous Substance Superfund (SF)	Leaking Underground Storage Tanks (LUST)
State & Tribal Assistance Grants (STAG)	Water Infrastructure Finance & Innovation Program (WIFIA)

1. Excludes supplemental funding.
2. In addition to annual appropriated resources, the Agency expects to receive an estimated $1.7 billion in Superfund tax receipts in FY 2027 not reflected here. These additional government revenues will support continued Superfund cleanup and enforcement.
3. Totals may not add due to rounding up to millions.
4. FY 2027 Budget includes $1.7 million to establish a new Good Samaritan Mine Remediation appropriation.

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[43] U.S. Envtl. Prot. Agency, *FY 2027 Budget in Brief* 15 (2026), https://www.epa.gov/system/files/documents/2026-04/00_fy-2027-bib_combined_final.pdf.