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ASSOCIATES LLC



**Analysis of the
President's FY 2024 Budget Request
for Federal Research, Health, Workforce
and Education Programs**

**Implications for Research, Education, and Academic
Medicine**

Prepared by Lewis-Burke Associates LLC
March 17, 2023

Biden Administration FY 2024 Policy Priorities



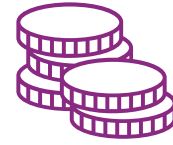
Cancer and Pandemic Preparedness



Climate and Clean Energy



Innovation



Equity

Highlights

Biden Policy Priorities and Funding Increases

New focus on cancer and continued emphasis on pandemic preparedness, climate and clean energy, innovation, manufacturing, STEM education and workforce development, environmental justice, and racial equity

Modest Growth for Several Key Agencies

NIH would receive very small increase for core biomedical research programs with most new funding for ARPA-H and the National Cancer Institute; Key NASA programs face significant headwinds that will impact future missions

Significant Cut Proposed for DOD S&T

A 20 percent cut proposed for DOD's Science and Technology accounts with continuing shift to prototyping, testing, and commercialization activities

Note

This analysis is based on the President's fiscal year (FY) 2024 budget request and does not indicate what final appropriation levels will be. This analysis is also based on best available budget information at the time of this writing for each federal agency and program. In some cases, limited information was available, such as a budget in brief or high-level funding tables.

While this document is important for understanding President Biden's policy priorities, it is up to Congress to embrace, modify, or reject budget proposals. Lewis-Burke will continue to provide updates on proposed federal agency priorities and new initiatives as additional budget information is released as well as analyses of congressional appropriations for major federal agencies and programs.

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Executive Summary

On March 9, 2023, President Biden released his third budget proposal to Congress and the first under divided government. The fiscal year (FY) 2024 President’s budget request proposes close to a 9 percent boost in discretionary spending compared to the FY 2023 enacted level for a total of around \$1.7 trillion. This would include \$886 billion for defense spending—an increase of \$28 billion or 3 percent—and \$809 billion for non-defense spending—an increase of \$49 billion or 6.5 percent—above FY 2023 enacted levels. While similar to previous Biden budget requests, the top FY 2024 budget priorities are expanded to include a new emphasis on cancer, veterans, safer communities, and women’s health while continuing prioritization of economic growth, competition and innovation, manufacturing, climate change and clean energy, equity, and global leadership to confront national security challenges. The budget request also lays out President Biden’s proposed approach to deficit reduction ahead of summer debt ceiling negotiations, including \$2.9 trillion in savings proposed over the next decade.

The release of the budget request kicks off the FY 2024 appropriations process, including congressional budget hearings and mark up of the 12 annual appropriations bills. The process is complicated by divided government and dramatically different budget priorities among the President, the House, and the Senate. House Republicans seek to force major cuts to non-defense discretionary spending through debt ceiling negotiations and have stated their desire to roll back funding to FY 2022 levels, up to a \$130 billion cut in discretionary spending. Meanwhile, the Senate hopes to build on the bipartisan process that enabled passage of FY 2023 appropriations in December 2022. That process saw modest growth to Biden priorities at lower levels than proposed. Amidst these differences, final appropriations are extremely unlikely to feature the major growth sought by the President and may result in a stalemate or year-long continuing resolution. While the budget request is just a recommendation to Congress, it does provide insight into federal agencies’ priorities and future directions, many of which can be advanced within existing authorities and without explicit congressional approval. It is ultimately up to Congress to decide which new proposals to embrace, modify, or reject as part of the annual appropriations process, but the budget request is influential in shaping and advancing new initiatives.

Overall, the FY 2024 budget request would increase funding for research and development, climate and clean energy, manufacturing, economic development, education, and healthcare programs of interest to the research, higher education, and academic medicine communities. The notable exception is a \$4.6 billion or 20 percent proposed cut to basic, applied research, and advanced technology development accounts for DOD’s Science and Technology programs compared to FY 2023 appropriations levels, which is an even larger cut than previous budget requests proposed. This is consistent with the Administration’s greater emphasis on prototyping, deployment, and commercialization of technologies rather than early-stage research and development. Also worth noting, the budget request proposes significant increases for education, economic development, and health care programs through mandatory spending as opposed to discretionary spending, which Congress rarely accepts. A few examples include \$20 billion in mandatory funding for pandemic preparedness, \$1.5 billion for the Commerce-led Regional Technology and Innovation Hubs program (Tech Hubs), and mandatory funds to increase Pell Grants by \$320.

The graphic below shows proposed FY 2024 funding levels for major federal research and education agencies compared to the FY 2023 enacted levels.

Key Agencies at a Glance (IN BILLIONS)

NSF
\$11.3 B
+15%

HHS
\$144 B
+12%

NIH and
ARPA-H
\$48.6 B
+2%

Education
\$90 B
+14%

Agriculture
\$30.1 B
+14%

Commerce
Total Requested:
\$11.7 B
+18% increase over
FY 2023
appropriations

Defense S&T
(6.1-6.3)
\$17.8 B
-20%

Energy
\$52 B
+11%

NASA
\$27.2 B
+7%

FY 2024 Biden Administration Science and Technology Priorities

Major proposed initiatives include:

- An additional \$2.5 billion for Advanced Research Projects Agency for Health (ARPA-H);
- \$1.2 billion for NSF’s Directorate for Technology, Innovation, and Partnerships and \$300 million for Regional Innovation Engines;
- More than a \$700 million increase in funding to support climate programs at NSF, DOE, USDA, NASA, EPA, and NIH;
- \$100 million for four new DOE Microelectronics Science Research Centers, \$50 million for up to 16 new Energy Earthshot Research Centers and \$40 million for four Fusion Energy R&D Centers;
- \$48.5 million in discretionary and \$1.5 billion in mandatory spending for Commerce-led Regional Tech Hubs in FY 2024;
- \$138 million, a \$101 million increase, for NIST’s Manufacturing Extension Partnership;
- More than \$2 billion across major agencies to broaden participation of historically underrepresented groups in STEM, especially at Minority Serving Institutions, and to support EPSCoR institutions; and
- Increases in funding across major agencies to support emerging technologies such as quantum information science, AI, microelectronics, advanced communications, and biotechnology.

Similar to prior requests, while the budget proposal increases funding for fundamental research at most science agencies, its primary focus is on use-inspired research, translation, and technology development and deployment. For example, the budget proposal would boost funding to \$1.2 billion for the new NSF Directorate for Technology, Innovation, and Partnership to support use-inspired research and technology development; provide \$2.5 billion to the new Advanced Research Projects Agency for Health (ARPA-H) to accelerate health breakthroughs; allocate \$650 million for Advanced Research Projects Agency-Energy (ARPA-E) to fund new programs in climate change adaptation, mitigation, and resilience as well as new clean energy technologies; launch a new DOE Foundation to help transition new energy and emerging technologies into the market; increase DOE applied energy programs by over \$600 million and energy demonstration, deployment, and supply chain programs by over \$500 million; and \$19 million for the new Advanced Research Projects Agency-Infrastructure in the Department of Transportation to find innovative solutions for transportation infrastructure and reduce road fatalities. The budget proposal would also continue to grow investments for emerging technology areas, such as biotechnology and biomanufacturing, quantum information science, artificial intelligence, microelectronics, and advanced communications.

Beyond top Biden Administration priorities, the budget request proposes modest increases for key federal agencies and programs compared to FY 2023 appropriations. For example, most new funding for NIH is for the National Cancer Institute and ARPA-H with modest growth proposed for core biomedical research programs and major NASA programs and missions continue to face significant budget pressure. The budget request also provides only \$48.5 million in discretionary spending—compared to \$500 million appropriated in total FY 2023—for the Department of Commerce’s Regional Tech Hubs, a signature new program in the *CHIPS and Science Act*. While the budget request proposes an additional \$1.5 billion in mandatory spending for the program in FY 2024 and \$2.5 billion more in additional mandatory funding in FY 2026, Congress is likely to reject it as obligated.

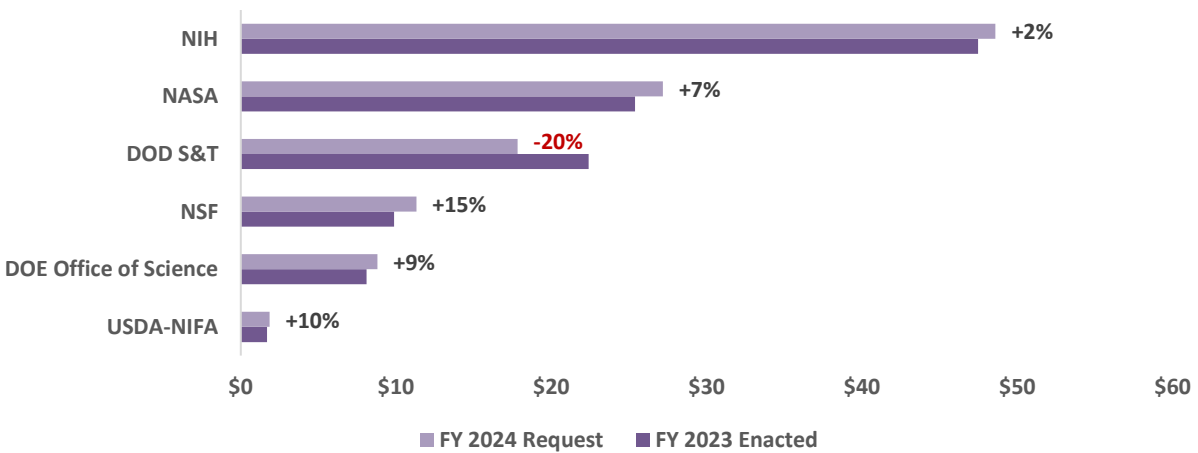
Addressing racial equity in science and engineering, education, and health care delivery remain a high priority. Examples of specific investments include over \$2 billion at NSF, DOE, USDA, and NASA for programs dedicated to increasing the participation of historically under-represented communities in science and engineering fields and building science and technology capacity in underserved institutions, including Minority Serving Institutions and EPSCoR jurisdictions; \$375 million, a \$267 million increase above the FY 2023 enacted level, for EPA’s Environmental Justice Program; and new funding to expand programs to address health inequities especially in mental health, maternal health, and nutrition.

The budget request would also provide increased funding for most education and workforce programs. Notable funding provisions include: a significant increase to the Pell Grant program, with a \$8,215 maximum award and continues the call from

last year to expand federal aid eligibility to Deferred Action for Childhood Arrivals recipients; \$150 million to provide funds for institutions of higher education to support campus mental health efforts; \$350 million to continue the Research Infrastructure Investments for HBCUs, TCUs, and MSI program established in the FY 2023 omnibus; and \$870 million for the Institute of Education Sciences, with a call to IES to support high-risk, high-reward education research with the increased funds. It is important to note that many of the major funding increases at the Department of Education called for by the budget request include new mandatory funding mechanisms that Congress is likely to reject. The budget request would also increase support for Registered Apprenticeships (RA) at the Department of Labor (DOL), with \$335 million in funding proposed, a \$50 million increase above the FY 2023 enacted level.

The graphic below shows relative priorities for science federal agencies in the FY 2024 budget request compared to the FY 2023 enacted funding levels.

FY 2024 Budget Request for Selected Science Federal Agencies (\$ in billions)



Below is an analysis of major new initiatives and funding proposals for relevant federal agencies of interest to the research, education, and academic medicine communities.

Department of Agriculture



In the President’s budget request, discretionary programs within USDA’s National Institute of Food and Agriculture (NIFA) would see an increase of \$167 million or 9.8 percent compared to the FY 2023 enacted level. USDA’s Agricultural Research Service (ARS) Salaries & Expenses would see an increase of \$194 million or 11.1 percent above FY 2023 enacted level.

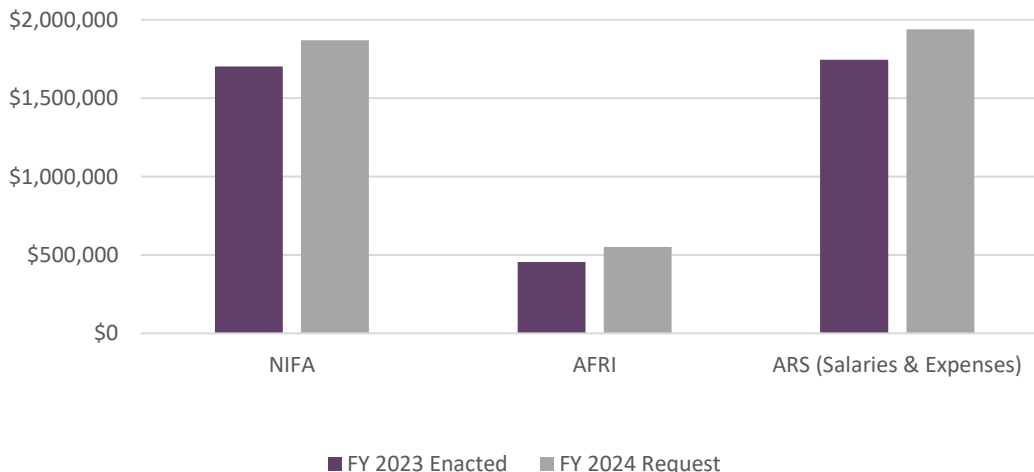
Quick Take: This budget offers relatively stable funding levels compared to FY 2023 enacted levels, with the exception of some smaller programs that would receive outsized funding increases for programs focused on agricultural extension, research facilities, Minority-Serving Institutions (MSIs), and women in agriculture. The budget request also demonstrates the continued emphasis on climate and resilience from USDA and the Biden Administration, evidenced through the request’s support for sustainable agriculture and net-zero emissions.

New Initiatives/Priorities: Following the FY 2023 enacted funding of \$2 million for the Research Facilities Act, the FY 2024 President’s budget made its first request for this program of \$10 million, specifying a focus on MSIs. Funding for Extension services at the 1994 Institutions, which serve Native American communities and Tribal Colleges, would increase by \$10 million over FY 2023 levels, a 90.9 percent increase. Other programs, such as Extension at 1890s Institutions and the Women & Minorities in STEM program would receive an additional \$4 million and \$305,000, respectively. The budget proposes \$5 million to create a new Nutrition Hub that would coordinate the six ARS-operated nutrition hubs across the country and connect USDA’s work in human nutrition to the Administration’s Cancer Moonshot goals. The budget also includes a \$15 million increase for Precision Nutrition.

The Bottom Line

USDA’s extramural funding would see primarily flat or modest increases in the FY 2024 budget request, with the largest increases proposed for MSIs and programs that connect to human health. This is consistent with this Administration’s last two budget requests and its emphasis on the revived Cancer Moonshot initiative. Support for USDA’s research, extension, and education programs is strong, and with the upcoming Farm Bill reauthorization on the horizon, there is likely to be more attention on these programs.

NIFA, AFRI, ARS
(in Thousands)





National Institute of Food and Agriculture

Many of NIFA's signature programs would receive flat or near-flat funding in the FY 2024 President's budget request, including: Smith-Lever (b) and (c); Hatch Act; McIntire-Stennis Cooperative Forestry; 1994 Research Grants; Education Grants at 1890s; Scholarships at 1890s; Crop Protection and Pest Management; and Aquaculture Centers. Extension services at 1890 Institutions would receive a 5.6 percent increase. However, several programs would see significant funding boosts, particularly those that serve minority communities, address climate change, or that will play a larger role in the Biden Administration's Cancer Moonshot:

- The Hispanic-Serving Institutions Education Grants Program would receive a \$4 million increase over the FY 2023 enacted levels.
- Extension services at the 1994 Institutions would increase by \$10 million over FY 2023 levels, and Payments to 1994 Institutions would more than double from \$7 million to \$15 million.
- Research at 1890 Institutions, also known as the Evans-Allen program, would receive an increase of \$12.8 million, 16 percent over FY 2022 enacted level.
- Sustainable Agriculture Research Education and Extension (SARE) would increase by \$10 million, a 20 percent increase over the FY 2023 enacted level.
- Of the \$95 million increase requested for the Agriculture and Food Research Initiative (AFRI) within NIFA, \$20 million would be invested in Cancer Moonshot efforts, such as work on nutrition and diet-related diseases, the production of foods or supplements that reduce cancer risk, and cancer research in animals.

Agriculture and Food Research Institute

In addition to the new focus on precision nutrition and the Cancer Moonshot, AFRI would be directed to focus investments in three climate-related areas:

- Climate science research to achieve net-zero greenhouse gas emissions in agriculture by 2050;
- Monitoring and measuring greenhouse gas emissions from food and agricultural systems; and
- Food and agriculture-based innovations in clean energy production.

NIFA Proposed Reductions and Terminations

Despite the very positive budget request overall, and no proposed cuts for ARS, some programs, mostly in NIFA, would receive decreased funding. In each of these cases, the same cut was proposed in last year's budget request.

- No funding was requested for Capacity Building for Non-Land-Grant Colleges of Agriculture; the program was funded at \$6 million in FY 2023.
- Supplemental and Alternative crops would be decreased by \$1.4 million; it was funded at \$2 million in FY 2023.
- The Administration proposes elimination of the Alfalfa Seed and Alfalfa Forage Systems and Continuing Animal Health and Disease programs.
- The Food Animal Residue Avoidance Database (FARAD) would be funded at \$2 million, a \$500,000 decrease.
- No funding for the Agricultural Genome to Phenome Initiative is included in the request; the program was funded at \$2 million in FY 2023.
- The Agriculture Advanced Research and Development Authority (AGARDA) would not receive funding; it was supported at \$2 million in FY 2023.



Agricultural Research Service

ARS Salaries and Expenses (S&E) would be funded at \$1.9 billion, an increase of \$194 million over the FY 2023 enacted level. This includes proposed investments in cross-cutting programs that would support the Administration's efforts to develop clean energy production and benefit rural economies. The budget request maintains that ARS is the "only agency within the federal government" that supports the development of carbon-neutral biobased products along their entire supply chain, from feedstock breeding to biorefining. As such, the request includes an \$88.5 million increase for Climate Science research and staff and \$83 million for Clean Energy research and staff. In line with the President's Cancer Moonshot initiative, the Administration also requests a \$15 million increase to support the cross-cutting Precision Nutrition and Crop Production programs' research and staff.

Of note, the request would also fund the National Bio and Agro-Defense Facility (NBAF) at \$112.1 million for FY 2023. This reflects additional funding for personnel, programs focused on research and medical countermeasures, and operations and maintenance.

Rural Development

The President's budget request includes \$400 million to continue the Broadband Pilot Program (ReConnect) that provides loans, grants, and a loan/grant combination to deploy broadband to underserved areas. This is \$52 million greater than the FY 2023 enacted level, and continues to build upon the *Infrastructure Investment and Jobs Act* which provided an additional \$2 billion for the program.

The Distance Learning and Telemedicine (DLT) grants would receive a modest increase, the President's budget request would fund this program at \$502 million, slightly above the \$466.5 million appropriated in FY 2023. This program is designed to assist rural communities that otherwise do not have access to learning and medical services over the Internet and is likely seeing decreases as many of the covid-era programs are downsized or removed.

The budget request would provide \$7 million for the Rural Innovation Stronger Economy (RISE) Grant program, \$5 million above its FY 2023 enacted level. The program assists distressed rural communities, particularly energy communities, in establishing jobs accelerators to create good jobs.

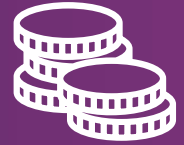
Department of Agriculture



U.S Department of Agriculture (in thousands of \$)

	FY 2023 Enacted	FY 2024 Request	FY 2024 Request vs. FY 2023
Agricultural Research Service, Salaries & Expenses	1,744,279	1,938,303	194,024 (11.1%)
National Institute of Food and Agriculture, Discretionary	1,701,031	1,868,425	167,394 (9.8%)
Agriculture and Food Research Initiative (AFRI)	455,000	550,000	95,000 (20.9%)
Hatch Act	265,000	265,000	--
Smith-Lever Act 3(b) and 3(c)	325,000	325,000	--
McIntire-Stennis Cooperative Forestry Act	38,000	38,000	--
Research at 1890 Institutions (Evans-Allen Program)	89,000	98,000	9,000 (10.1%)
Research Grants for 1994 Institutions	5,000	5,000	--
Extension Services at 1890 Institutions	72,000	76,000	4,000 (5.6%)
Extension Services at 1994 Institutions	11,000	21,000	10,000 (90.9%)
Payments to the 1994 Institutions	7,000	15,000	8,000 (114.3%)
Education Grants for 1890 Institutions	30,000	30,000	--
Women and Minorities in STEM Fields	2,000	2,305	305 (15.3%)
Capacity Building for Non-Land Grant Colleges of Agriculture	6,000	0	-6,000 (100%)
Multicultural Scholars, Graduate Fellowship, and Institution Challenge Grants	10,000	10,000	--
Hispanic Serving Agricultural Colleges and Universities Endowment Fund	16,000	20,000	4,000 (25.0%)
Food Safety and Inspection Service (FSIS)	1,158,266	1,290,419	132,153 (11.4%)
Animal and Plant Health Inspection Service (APHIS), Salaries & Expenses	1,171,071	1,188,788	17,717 (1.5%)

Department of Commerce



The Department of Commerce includes the Economic Development Administration (EDA), National Institute of Standards and Technology (NIST), and National Oceanic and Atmospheric Administration (NOAA). The Department of Commerce overall would receive \$12.3 billion in discretionary funding, an 10.6% percent increase above FY 2023 enacted levels.

Economic Development Administration



In the FY 2024 budget request, the Biden Administration proposes a \$779 million appropriation for the Economic Development Administration (EDA), a \$276.48 million increase over the FY 2023 budget request. In addition to the proposed discretionary funding, the budget requests \$1.5 billion in mandatory funding to support the Regional Technology and Innovation Hubs program (Tech Hubs).

Quick Take: The President’s FY 2024 budget request would provide a 56 percent increase to the base budget over FY 2023. This aligns with the Biden Administration’s consistent use of EDA to promote widespread economic growth through support for community-driven initiatives, a key priority for the White House.

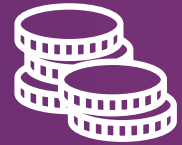
Major Cuts/Eliminations: The budget request would fund the Public Works Program at \$100 million, a \$21.5 million decrease below the FY 2023 level. The budget justification explains that the cut would be made as a tradeoff for the “new suite of place-based economic development programs.” Additionally, the budget proposed a \$6.5 million cut to the Economic Adjustment Assistance Program (EAA). Collectively, these longstanding programs invest in a wide variety of projects to support distressed communities, including infrastructure, such as technology-based facilities; research and development centers; planning support; technical assistance; and skills training programming and facilities.

New Initiatives/Priorities: In line with EDA’s investment priority to promote equitable economic growth, the budget proposes the launch of a new \$20 million Assistance to Indigenous Communities program that would provide targeted support and resources for these communities to foster economic growth and diversification.¹

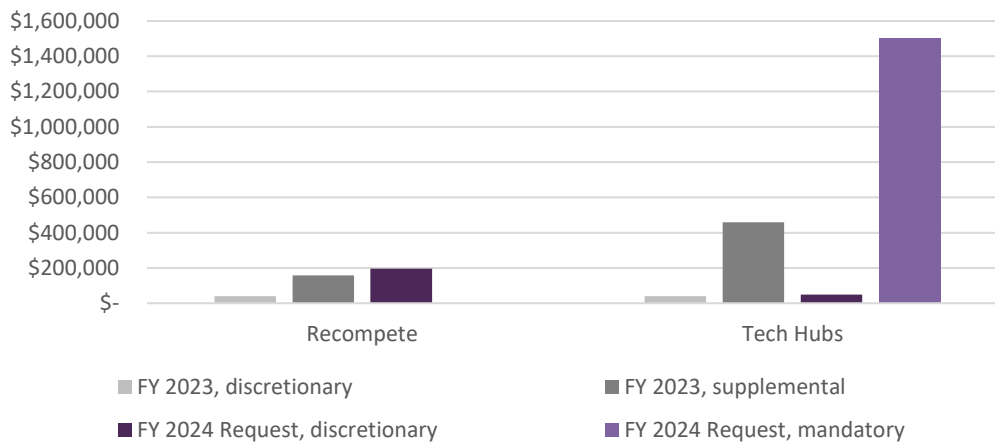
The Bottom Line

The Administration’s proposal for FY 2024 requested historic investments in programs supporting place-based economic development and workforce, while paring back funding for accounts that support traditional public works projects. The budget would increase discretionary funding for EDA by more than 40 percent, with an additional \$1.5 billion requested in mandatory funding for the Tech Hubs program. The Administration’s commitment to growing EDA’s budget aligns with its broader goal of catalyzing economic growth across the country, instead of anchor institutions like universities. This push for larger regional investments comes on the heels of the \$3 billion EDA received from the *American Rescue Plan Act of 2021* (ARP) that allowed the agency to compete the Build Back Better Regional Challenge and the Good Jobs Challenge, among others, and bolstered EDA’s capacity to oversee extensive regional development initiatives. The *CHIPS and Science Act of 2022* built on this with the authorizations of Tech Hubs and the Recomplete program. Robust funding and successful implementation of these new programs is crucial for EDA to maintain its current growth.

¹ A full list of EDA’s updated investment priorities is available at <https://content.govdelivery.com/accounts/USEDA/bulletins/2ccd92e>.



One-Year Enacted Funding Levels
(In Thousands of \$)



New and Signature Initiatives

Tech Hubs

The President’s budget would provide \$48.5 million in discretionary funds for the Tech Hubs program and requests an additional \$1.5 billion in mandatory funds, building on the \$500 million appropriated in FY 2023 to launch the program. Tech Hubs, which were authorized as part of the *CHIPS and Science Act of 2022*, will position communities to be competitive innovation clusters through research development, workforce training, entrepreneurship, commercialization, and manufacturing around technology areas that are key for domestic and global competitiveness. The budget justification aligns with authorizing legislation that outlines implementation of the program, identifying three different components: the *Designation* of at least 20 hubs, smaller *Strategy* grants, and larger *Implementation* grants. The first competition of the Tech Hubs program is expected this year, supporting both Strategy and Implementation grants but it is up to the Secretary of Commerce to determine the scale and number of hubs for FY 2023 based on the appropriated funds. The President’s budget request demonstrates support for growing the program in the future to create more innovation clusters that would help the U.S. remain competitive in key technology areas.

Recompete Pilot Program

The President’s budget request would provide \$195.5 million for the Recompete Pilot Program, which would build on the \$200 million appropriated in FY 2023 to create the program. Recompete is expected to be competed in the first half of 2023 and will provide grants to communities experiencing persistently high employment gaps among prime-age workers (ages 25-54) to develop 10-year comprehensive economic development plans (“Recompete Plans”) and invest in the implementation of those plans. Plans should tailor to multifaceted community needs to engage those not participating in the labor force, including workforce training, infrastructure improvements, entrepreneurial guidance, and more.

Good Jobs Challenge

The budget request would fund the Good Jobs Challenge, which was created through the American Rescue Plan (ARP) Act, at \$97 million which would make this a newly permanent program at EDA. The Good Jobs Challenge was created in alignment with EDA’s workforce development investment priority, and awards employer-led education and training projects with support for wraparound services like childcare and transportation.



Build to Scale

The request would fund the Build to Scale program (formerly known as the Regional Innovation Program) at \$45 million, flat funding compared to the FY 2023 President’s request and \$5 million below the FY 2023 enacted level. Build to Scale provides support for universities and research institutes to develop and scale commercialization efforts, to cultivate funding campaigns for promising startups, and to further tech-based economic development initiatives. Build to Scale currently runs two core challenges, the Venture Challenge, and the Capital Challenge, as well as the occasional sector-specific Industry Challenge.

Unlike previous budget requests, the FY 2024 request does not specify the allocation of funds for each track but rather would give \$44 million to distribute among the Venture, Capital, and Industry Challenges. The budget would also provide \$1 million for the research and information program to develop guidebooks and models for individuals or entities “seeking to support technology entrepreneurs, increase access to entrepreneur-ready capital, and build a STEM-skilled workforce.” The Industry Challenge has not been competed since FY 2020.

Research and Evaluation

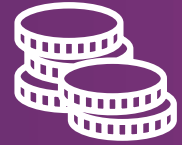
EDA’s Research and Evaluation program would receive \$2 million, seeing no change from the FY 2023 level. The budget justification specifically notes that funds are to go toward projects that inform economic recovery, competitiveness, and resilient innovation in distressed rural and urban regions.

Assistance to Coal Communities

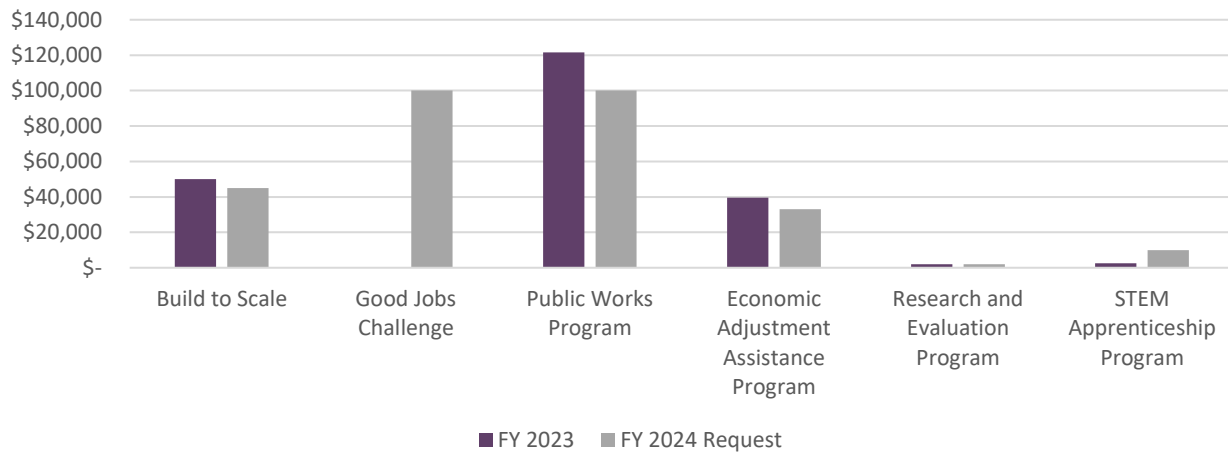
The budget proposed an increase of \$80.5 million for the Assistance to Coal Communities program to support areas facing significant job loss from the downturn in the coal economy. This would be more than double the amount provided in FY 2023 for the broader Assistance to Energy Transition Communities program, which was inclusive of coal, nuclear, and biomass power. The Administration’s continued commitment to the program reflects their priority to support the transfer from economic reliance on fossil fuels and spur economic resilience in communities anchored to coal production. The additional funding will support larger grants for infrastructure, industry clusters, entrepreneurship and small business support, and workforce programming in these communities.

STEM Apprenticeship Program

The budget request proposed funding the STEM Apprenticeship Program at \$10 million in FY 2024, which would be an increase of \$7.5 million over FY 2023. The STEM apprenticeship program aims to uplift nontraditional higher education to meet the growing demands of our nation’s innovative workforce. In EDA’s budget justification document, they argue the increase is necessary because the program is “oversubscribed, 10 times by budget.” With the proposed increase in funds, EDA would expand the program, including the number of grantees and the range of support to grantees.



One-Year Enacted Funding Levels (In Thousands of \$)



Economic Development Administration (in thousands of \$)

	FY 2023 Enacted	FY 2024 Request	FY 2024 Request vs. FY 2023
Economic Development Administration (EDA)	498,000	779,000	281,000 56.4%
Regional Innovation Program	50,000	45,000	-5,000 -10.0%
Good Jobs Challenge	--	97,000	--
Public Works Program	121,500	100,000	-21,500 -17.7%
Economic Adjustment Assistance Program	39,500	33,000	-6,500 -16.5%
Research and Evaluation Program	2,000	2,000	--
STEM Apprenticeship Program	2,500	10,000	7,500 300.0%
Recompete Pilot Program	41,000	195,500	154,500 376.8%
Supplemental Funding	159,000		
Regional Technology Innovation Hubs Discretionary funding	41,000	48,500	7,500 18%
Supplemental Funding	459,000		--
Mandatory Funding		1,500,000	--



National Institutes of Standards and Technology



NIST would be funded at \$1.63 billion in FY 2024, essentially flat when compared with the FY 2023 enacted level, excluding the one-time supplemental funding.

Quick Take: The budget request would increase funding for research in critical and emerging technologies, including artificial intelligence, quantum information science, advanced communications, and biotechnologies. NIST would also prioritize strengthening the nation’s supply chain and domestic manufacturing capabilities.

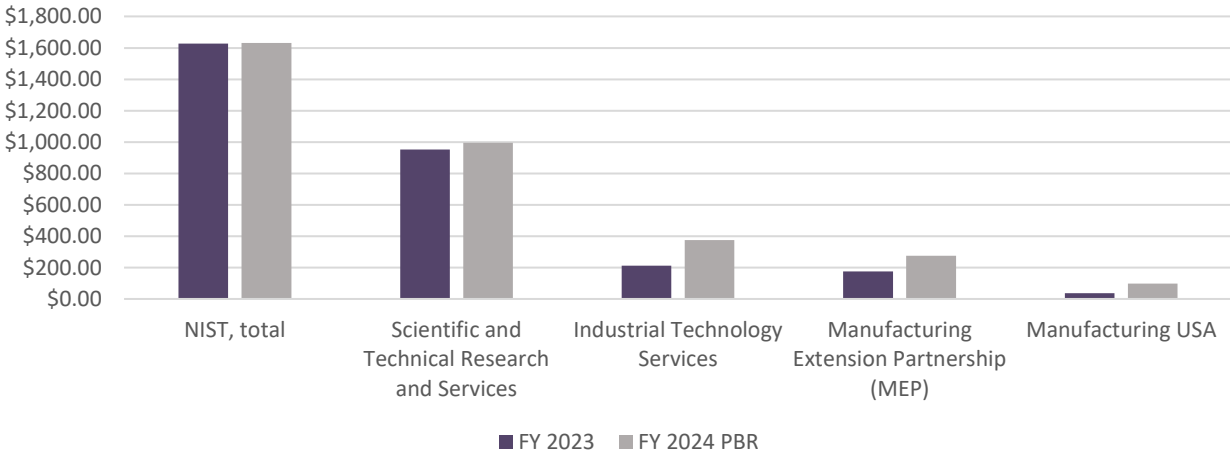
New Initiatives/Priorities: The budget request would increase funding for Manufacturing USA and the Hollings Manufacturing Extension Partnership (MEP) to expand the programs.

Major Cuts/Eliminations: The FY 2024 request would continue to provide funding boosts for NIST, consistent with previous budget requests from the Biden Administration.

The Bottom Line

The FY 2024 budget request reflects many of the Administration’s priorities in emerging technology research areas as well as activities to advance U.S. capabilities in supply chain resiliency and domestic manufacturing. NIST has requested additional funding in previous years to support Manufacturing USA Institutes and the MEP program that Congress has not previously supported.

Major NIST Programs (In millions)





Proposed Reductions and Terminations

There are no major proposed reductions or terminations in the NIST budget request for FY 2024.

New and Signature Initiatives

Scientific and Technical Research and Services

The Scientific and Technical Research and Services (STRS) account would be funded at \$995.0 million, an increase of \$42 million or 4.4 percent above the FY 2023 level. Research would be aligned with Administration priorities including, Critical and Emerging Technologies (CET), Cybersecurity and Privacy, Trustworthy and Resilient Domestic Supply Chains, Climate Change and Environmental Sustainability, and Strengthening Equity and Diversity.

Manufacturing USA

The budget request would provide \$97.3 million to the Manufacturing USA program, an increase of \$60.3 million. This increase would support the existing 16 Manufacturing USA Institutes and facilitate the “creation and operation of test beds, support for technology transfer in emerging priority areas, and engagement with underserved communities.”

Hollings Manufacturing Extension Partnership (MEP)

The MEP program would be funded at \$275.9 million in FY 2024, an increase of \$100.9 million or 57.6 percent over the 2023 enacted level. MEP supports small and medium manufacturers and aims to strengthen domestic supply chains. As in previous budget requests from the Biden Administration, the proposed increase would enable MEP to provide additional services to more companies to support critical supply chains and workforce development.

Construction of Research Facilities (CRF)

The budget request would provide funding to support the repair and revitalization of NIST facilities as identified in a recent National Academies report.¹ This would include \$49 million for NIST facilities across the Gaithersburg, Maryland, and Boulder, Colorado, campuses; \$50 million for Gaithersburg Central Utility Plant (CUP) modernization; and \$30 million for multiple HVAC system replacements.

Ongoing Areas of Interest

NIST is anticipated to continue focusing on research related to computing, cybersecurity, artificial intelligence, quantum information science and engineering, biotechnology, advanced manufacturing, as well as Measurement Science Modernization.

¹ National Academies report: “Technical Assessment of the Capital Facility Needs of the National Institute of Standards and Technology” available at <https://www.nationalacademies.org/our-work/technical-assessment-of-the-capital-facility-needs-of-the-national-institute-of-standards-and-technology>.



**National Institute of Standards and Technology
(NIST)**
(in millions of \$)

	FY 2023 Enacted*	FY 2024 Request	FY 2024 Request vs. FY 2023
NIST, Total	1,627.3	1,632.0	4.7 (0.3%)
Scientific and Technical Research and Services	953.0	995.0	42.0 (4.4%)
Industrial Technology Services	212.0	374.9	162.9 (76.8%)
Manufacturing USA	37.0	97.3	60.3 (167.5%)
Hollings Manufacturing Extension Partnership	175.0	275.9	100.9 (57.6%)

* Excludes one-time supplemental.

Source: The NIST budget summary is available at <https://www.nist.gov/congressional-and-legislative-affairs/nist-appropriations-summary/fy-2024-presidential-budget/>.



National Oceanic and Atmospheric Administration

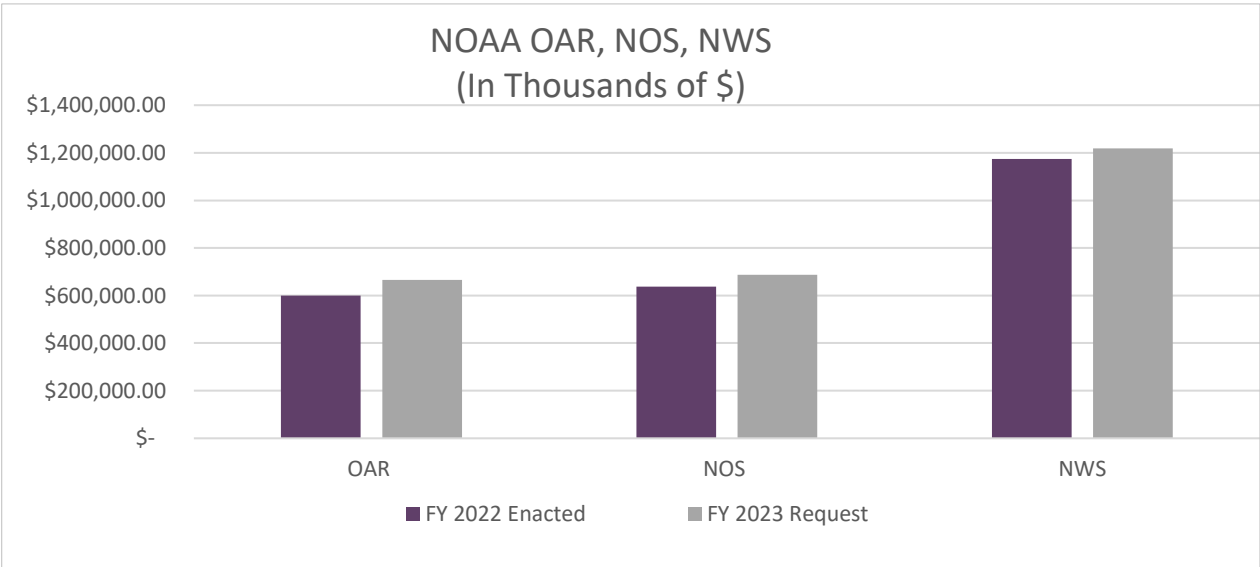


At the time of this writing, the NOAA FY 2024 Blue Book was not available. Below reflects the information that is currently available in the budget appendices for the Department of Commerce.

The budget requests a total of \$6.808 billion for NOAA in FY 2024, an increase of \$450 million or about seven percent over the FY 2023 enacted levels. This is nearly flat with the President’s budget request from FY 2024 indicating a pace setting for the agency and the Administration’s climate goals. Most of the proposed increase, approximately \$370 million, would go toward updating and managing NOAA’s satellite fleet. The National Weather Service would be funded at 1.3 billion, an increase of about \$50 million or 4.3 percent. The request included \$231 million for climate research programs through the Office for Oceanic and Atmospheric Research (OAR). This is a small increase of just \$7 million, far less than the dramatic increases that have been proposed in previous years, but likely indicative of a nod to fiscal responsibility as the Agency has seen massive growth over the last three fiscal cycles.

The Bottom Line

While very few details are available for NOAA, the available lines indicate slowing growth for the agency, likely resulting from the large increases given via regular and supplemental appropriations, the Inflation Reduction Act, and the Infrastructure Investment and Jobs Act. Stagnant topline allocations due to inflation and deficit concerns and the divided Congress indicate a difficult road to finalization of FY 2024 appropriations.





The President's FY 2024 budget request proposes \$145 billion for Research, Development, Technology, and Evaluation (RDT&E), surpassing last year's record funding by \$5.2 billion or 3.7 percent above the FY 2023 enacted level and \$14.9 billion or 10.3 percent above the FY 2023 request. However, the Biden Administration continues to prioritize shovel-ready projects at the expense of science and technology (S&T) accounts—which include basic research (6.1), applied research (6.2), and advanced technology development (6.3)—in favor of more deliverable capabilities (6.4 and up).

Quick Take: The Biden Administration continues to underscore the importance of countering global threats and increasing U.S. military competitiveness. The budget reiterates its support for Ukraine and European allies after a year of conflict in the region and, recognizing the threats posed by China, Russia, Iran, and North Korea, requests an increase in overall defense spending to \$842 billion. That level would represent a \$26 billion or 3.2 percent increase over the FY 2023 enacted level and far surpasses the \$773 billion the President requested last year. The FY 2024 budget also notes DOD's role in spurring innovation and supports RDT&E priorities, such as artificial intelligence and machine learning, directed energy, renewable energy technology, microelectronics, and other technologies consistent with the [National Defense Strategy](#) (NDS) and plans previously outlined by the Undersecretary of Defense for Research and Engineering Heidi Shyu.

The RDT&E budget prioritizes space technology and prototyping, navy classified programs, cyber operations support, missile sensors, naval rapid prototyping, ground based strategic deterrence and quantum applications. However, these investments come at the expense of air missile defense, space test and training, biological warfare defense, and Space Force basic research. Similar to the Administration's prior requests, the FY 2024 budget would invest in energy efficiency and resilience measures to address climate change and improve operational readiness in increasingly challenging environments.

Major Cuts/Eliminations: Despite the \$5.2 billion proposed increase to overall RDT&E, the S&T (6.1-6.3) accounts would be slashed across the board, with a nearly \$4.2 billion cut or 19 percent less compared to FY 2023 enacted. The budget request would overall reduce the following accounts relative to FY 2023 levels:

- Basic research (6.1) funding by 5.3 percent;
- Applied research (6.2) funding by 21.8 percent; and
- Advanced research (6.3) funding by 20.1 percent.

New Initiatives/Priorities: While the Department has yet to release detailed program plans for FY 2024, Under Secretary of Defense (Comptroller) Michael McCord stressed the continuity of this budget with the Administration's previous requests. The budget also continues to advance NDS priorities with the goal to outpace competitors, such as China, and maintain our competitive edge in emerging technologies.

This year, the Administration requests new and historic RDT&E funding levels for **Advanced Component Development and Prototypes**, which funds modernized weapons systems, advanced capabilities, soldier lethality, and cyber resilience. Throughout the RDT&E budget, the Administration proposes new or increased investments compared to FY 2023 such as:

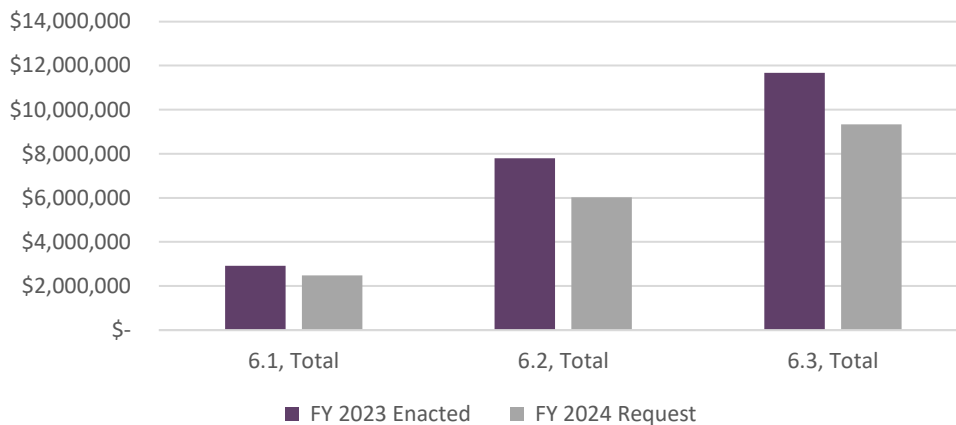
- **Cyber:** \$2 billion in additional funds for cyberspace and cyber security activities, including investments aimed at reducing risk, bolstering encryption, and expanding the Cybersecurity Maturity Model Certification Program.
- **Space:** \$61.7 million in new funding for space-based IT and data analytics systems, \$164.6 million in space tech transition, and a combined \$1.1 billion in resilient missile warning and tracking systems.
- **Microelectronics:** \$2.6 billion to fill gaps in advanced packaging and increase visibility into the defense industrial base supply chain to better mitigate and manage supply chain risk.
- **Artificial Intelligence (AI):** \$1.8 billion for AI efforts across the Department including adopting AI and machine learning capabilities, developing an AI-skilled workforce, and implementing data management and modernization efforts.



The Bottom Line

With increasing tensions in the Pacific and continued conflict in Ukraine, the Biden Administration has again recognized the need to invest in advanced technology that will enable American integrated deterrence as outlined in the national security strategy. As such, the Administration proposes an increase (3.2 percent) to the defense budget over FY 2023. While RDT&E accounts would collectively see budgets rise along with overall spending, proposed increases are concentrated in the advanced technology accounts of 6.4 and up, slashing S&T (6.1-6.3) accounts by a combined \$4.2 billion that Congress has historically restored. The Administration and the DOD continue to signal its prioritization of modernizing and delivering fieldable capabilities to the warfighter faster and more efficiently.

One-Year Enacted Funding Levels (in thousands of dollars)



Proposed Reductions and Terminations

Although the overall DOD budget request for FY 2024 RDT&E would provide an approximate \$5 billion increase over the FY 2023 enacted level (\$145 billion vs. \$140 billion), significant decreases are again proposed for basic and applied research accounts. As proposed, the S&T accounts (6.1-6.3), would be funded at \$17.8 billion, a \$4.6 billion reduction compared to FY 2023 enacted levels. Basic research would be funded at \$2.5 billion (a 15 percent decrease), applied research would be funded at \$6 billion (a nearly 23 percent decrease), and advanced technology development would be funded at \$9.3 billion (a 20 percent decrease), all compared to FY 2023 enacted levels. Consistent with requests from the previous two years, and likely heightened because of tensions in the Indo-Pacific and Europe, the Biden Administration again proposes prioritizing the acceleration of battlefield-ready capabilities.

As noted above, the **basic research** investments across all services (Army, Navy, Air Force and Space Force) including Defense-Wide accounts would total \$2.5 billion, representing a decrease of \$440 million (15 percent) compared to FY 2023 enacted funding. Under this plan, the Army basic research funding would see the largest decreases, nearly \$140 million, while the Navy and Air Force would see reductions by 7.5 percent and 4.6 percent, respectively. While the **applied research accounts** combined reflect a \$1.8 billion decrease compared to FY 2023 enacted levels, the \$6 billion request reflects a \$226 million increase compared to the President's prior year request.



Although overall Defense-wide RDT&E would increase by 4.7 percent, the Defense-wide 6.1 and 6.3 accounts would decrease by \$166 million and \$777 million, respectively. Despite the reduction in 6.1 funding, the request for Defense-Wide Historically Black Colleges and Universities and Minority Institutions remained flat compared to FY 2023 enacted levels, at \$100 million.

Ongoing Areas of Interest

Throughout the budget request, DOD proposes renewed or new emphasis in the following high-interest areas:

Quantum

The budget request includes a new defense-wide line for quantum applications, funded at \$75 million. This is similar to the Department's start of the Microelectronics Commons program in FY 2023 that seeks to find ways to develop and manufacture the necessary quantum semiconductor components to enable networks, cryptography, networking and other applications.

Cyber

The request proposes \$13.5 billion in cybersecurity and cyber defense programs and initiatives, reflecting nearly \$2 billion in increased investments proposed for FY 2024. For the first time, the Administration is requesting \$1.1 billion for U.S. Cyber Command to manage the Joint Cyber Mission Force portfolio, consistent with plans outlined in the [National Cybersecurity Strategy](#) proposing to consolidate and integrate the nation's cyber defense and disruption capabilities.

As with most of the priority investments reflected in the RDT&E budget, the majority of the cyber initiatives with proposed funding increases live within the higher technology readiness level accounts. For instance, the Administration requests \$115 million in new funding for the Cyber Training Environment, a \$95 million increase for Air Force defensive cyberspace operations, a new start for Air Force cyber space operations systems for \$4.9 million, and \$65 million in new funds for CYBERCOM activities. The Biden Administration also aims to bolster the Defense Industrial Base Cyber Security Initiative, proposing \$25 million, compared to \$10 million enacted in FY 2023.

Climate

Despite the Administration's emphasis on climate research and in contrast with FY 2023 enacted level of \$449.7 million, the budget proposes cuts to the Strategic Environmental Research and Development Program and Environmental Security Technical Certification Program (SERDP & ESTCP) with a budget total of \$402.9 million, a nearly \$50 million cut.

Space

The budget request would include \$30 billion for the U.S. Space Force, a \$3.7 billion or 14 percent increase above the FY 2023 enacted level. This includes \$19.2 billion for Space Force RDT&E (a 16 percent increase), with the largest plus-ups requested in accounts that fall within Advanced Component Development and Prototyping, such as space IT and data analytics (\$61.7 million in new proposed funding) mentioned above. Combined, the S&T accounts (6.1-6.3) would decrease by \$241 million or 23 percent under the FY 2024 budget proposed. Notably, this includes no funding requested for 6.1, which Congress provided the service for the first time in FY 2023. Instead, the request focuses on the development, prototyping, and deployment of new space technologies and capabilities, including for missile-tracking, in-space communications, and operational test and training infrastructure.

Workforce

The budget request would continue the Administration's emphasis on upskilling/reskilling the defense workforce and increasing defense civilian and military compensation, including a 5.2 percent pay raise for military and civilian personnel.



The budget request emphasizes the need to support increased training across the Department in line with technological advancements, including the development of an Artificial Intelligence (AI) workforce. Additionally, the Industrial Base Analysis and Sustainment (IBAS) program would receive an increase of \$186.8 million for industrial workforce development and training projects to help improve the defense workforce pipelines.

Artificial Intelligence (AI)

The budget would invest a total of \$1.8 billion in Artificial Intelligence (AI) efforts, reflecting the DOD’s prioritization of AI, one of the critical technology areas identified by the Department. The request includes increases for artificial intelligence and machine learning research programs under each of the 6.1-6.3 (S&T) accounts. A large majority of the funding, \$615.2 million, would go toward the Chief Digital and Artificial Intelligence Officer (CDAO), an office created by the Department in 2022, for technology demonstration and validation efforts (6.4).

Other Defense Agencies and Program

The **Defense Advanced Research Projects Agency (DARPA)** budget is proposed at \$4.4 billion representing a \$367.7 million increase relative to the FY 2023 enacted level. DARPA proposes significant cuts to Defense Research Sciences, Information and Communications technology while increasing funds for Network-Centric Warfare Technology.

The **Defense Threat Reduction Agency (DTRA)** would receive \$686.5 million, an increase of nearly \$20 million compared to FY 2023 enacted funding levels. However, DTRA’s basic research initiatives would be funded at \$14.7 million, which is \$1.8 million less than the FY 2023 enacted level.

The **Defense Health Program** would receive \$931.8 million, a substantial decrease of 69.4 percent compared to the FY 2023 enacted level of \$3 billion. Of note, there were extensive cuts and some eliminations of funding to the Army’s medical and biomedical research programs, which began in FY 2023. However, consistent with prior budget requests, the Congressionally Directed Medical Research Program (CDMRP) accounts for much of the difference between the enacted and requested amounts, as CDMRP funding is added by Congress during the appropriations process and not included in the President’s budget request.

Source: DOD’s FY 2024 Budget Summary and Background Information is available at <https://comptroller.defense.gov/Budget-Materials/Budget2024/>.

Department of Defense (in thousands of \$)

	FY 2023 Enacted	FY 2024 Request	FY 2024 Request vs. FY 2023
RDT&E, total	139,760,526	144,979,625	5,219,099 (3.7%)
S&T, Total	22,391,509	17,824,720	-4,566,789 (20.4%)
6.1, Total	2,920,684	2,479,661	-441,023 (15.1%)
6.2, Total	7,796,357	6,017,674	-1,778,683 (22.8%)
6.3, Total	11,674,468	9,327,385	-2,347,083 (20.1%)

Department of Defense



Army RDT&E	17,150,141	15,775,381	-1,374,760 (8.0%)
Army 6.1	637,023	497,455	-139,568 (21.9%)
Army 6.2	1,812,257	948,358	-863,899 (47.7%)
Army 6.3	2,500,263	1,455,986	-1,044,277 (41.8%)
Navy RDT&E	26,017,309	26,922,225	904,916 (3.5%)
Navy 6.1	688,992	637,263	-51,729 (7.5%)
Navy 6.2	1,487,214	1,026,339	-460,875 (31.0%)
Navy 6.3	1,304,873	1,016,552	-288,321 (22.1%)
Air Force RDT&E	44,946,927	46,565,356	1,618,429 (3.6%)
Air Force 6.1	612,317	583,858	-28,459 (4.6%)
Air Force 6.2	1,744,411	1,433,320	-311,091 (17.8%)
Air Force 6.3	1,096,168	891,376	-204,792 (18.7%)
Space Force RDTE	16,631,377	19,199,340	2,567,963 (15.4%)
Space Force 6.1	55,000	0	-55,000 (100.0%)
Space Force 6.2	360,601	206,196	-154,405 (42.8%)
Space Force 6.3	615,040	582,526	-32,514 (5.3%)
Defense Wide RDT&E	34,565,478	36,185,834	1,620,356 (4.7%)
Defense Wide 6.1	927,352	761,085	-166,267 (17.9%)
Defense Wide 6.2	2,391,874	2,403,461	11,587 (0.5%)
Defense Wide 6.3	6,158,124	5,380,945	-777,179 (12.6%)
Defense Health R&D	3,041,610	931,773	-2,109,837 (69.4%)



The president's budget request proposes \$90 billion in funding for the discretionary programs within the Department of Education (ED), a 13.6 percent increase compared to the FY 2023 enacted level. The Pell Grant program's maximum award would be \$8,215 for the 2024–2025 award year, an increase of \$820 when compared to the 2023–2024 school year.

Quick Take: The FY 2024 budget request would support the longstanding Biden Administration priorities of providing increased funding for Minority-Serving Institutions (MSIs) and under-resourced institutions, supporting teacher preparation programs, expanding funding for Title I programs, increasing the number of mental health professionals in schools, increasing access and affordability of postsecondary education, as well as expanded investments in innovative education research.

New Initiatives/Priorities: The request would fund several new programs of interest, including a new mandatory funding proposal jointly carried by the Department of Health and Human Services to provide free, high-quality preschool to all four-year old children. Also included in the request is a new \$25 million dollar **Raising the Bar on Multilingualism** program that would help K-12 schools scale multi-lingual education programs and \$10 million for postsecondary fellowships for multilingual educator preparation. The request would also provide \$500 million for a new **Accelerated Success: Free Community College** grant program to provide two years of free community college to students enrolled in high-quality community college programs and \$2 million to support a **Commission on the Future of the Teaching Profession** to study the needs of the teaching field and make recommendations to strengthen the teacher pipeline and address challenges faced by educators. The request would expand the **School- and Campus-Based Mental Health Service** program to include a \$150 million grant program to address and support campus mental health efforts at institutions of higher education. Other new proposed programs include Graduate Fellowships to Prepare Faculty in High Need Areas at Colleges of Education; Systemwide Holistic Student Supports Program; Postsecondary Advancement and Success Technical Assistance Center; and the Career-Connected High Schools initiative. Further details on these programs are included in the below analysis.

Major Cuts/Eliminations: The FY 2024 budget request does not include any major cuts or eliminations to educational research, student support, or teacher preparation programs. Some student aid programs, such as the Federal Work Study and Supplemental Educational Opportunity Grants, would receive flat funding under this request.

The Bottom Line

This budget request continues efforts by the Administration to support students through investing in teacher and school staff development; expanding Pell Grants; supporting student mental health; increasing funding for HBCUs, TCCUs, and MSIs; and proposals to increase access and affordability of postsecondary education. For many of the major funding increases, the budget request calls for new mandatory funding mechanisms that Congress will likely reject.



New or Signature Initiatives and Funding for Programs of Note

Elementary and Secondary Education and Teacher Preparation

The FY 2024 request calls for significant investments in Elementary and Secondary Education (ESEA) programs, including \$20.5 billion for **Title I**. The **Education Innovation and Research (EIR)** program would receive \$405 million in funding, a \$121 million increase over the FY 2023 enacted level. The budget request emphasizes its desire for the EIR program to continue to support evidence-based strategies focused on the impact of the COVID-19 pandemic and includes a call for the EIR program to focus on improving educational outcomes for students in foster care.

The request includes a proposed \$428 million investment for K-12 schools to increase the number of counselors, nurses, school psychologists, social workers, and other health professionals in schools via the School-Based Mental Health Services and Mental Health Services Demonstration programs. Similar to FY 2023, significant funding is also proposed for **Personnel Preparation grants** (\$250 million, an increase of \$135 million compared to FY 2023) to support a pipeline of special educators. **Teacher Quality Partnership (TQP) grants** would be provided \$132.1 million with a focus on teacher residencies and Grow Your Own programs. The request includes \$30 million for the **Augustus Hawkins Centers of Excellence** program, to support diversifying the educator workforce by increasing the number of high-quality teacher preparation programs at Historically Black Colleges and Universities (HBCUs), Tribally Controlled Colleges and Universities (TCCUs), and Minority-Serving Institutions (MSIs). The **Promise Neighborhoods program** would receive \$106 million, \$15 million more than in FY 2023. The **American History and Civics Education programs** would receive \$73 million, \$50 million above the FY 2023 level to support a new program to fund evidence-based strategies to increase understanding of how the U.S. government operates, promote student empowerment, bring students from different communities together, and develop student media and digital literacy. The budget request also proposes a \$10 million investment to fund the **Graduate Fellowships to Prepare Faculty in High Need Areas at Colleges of Education** program to grow education faculty in STEM, special education, and language instruction.

In the **Career and Technical Education (CTE)** space, \$215.4 million would be provided for the CTE National Program. Similar to the FY 2023 request, the Biden Administration proposed \$200 million for a new **Career-Connected High Schools** initiative that would provide competitive grants to promote partnerships between industry, high schools, and institutions of higher education to better integrate the last two years of high school and the first two years of postsecondary education. The proposed FY 2024 competition would focus on “high-quality, paid work-based learning pathways for youth, including re-engaging students who are currently disconnected from the education system to help students transition from secondary to postsecondary education systems, earn career-related credentials, and gain access to high-quality jobs.”

Student Aid

The request would provide a \$820 funding increase to the maximum **Pell Grant**, setting the maximum award at \$8,215 for the 2024-2025 school year. This increase would come from a \$500 discretionary funding increase paired with a \$320 increase in mandatory funding. The budget proposes flat funding for the **Federal Work Study (FWS)** and **Federal Supplemental Educational Opportunity Grant (SEOG)** programs at FY 2023 levels. The request also notes the Administration’s continued commitment to double the maximum **Pell Grant** by 2029 and continued support for expanding federal student aid to Deferred Action for Childhood Arrivals (DACA) recipients.



Higher Education Grant Programs

For FY 2023, the request would call for \$886.8 million for **Title III programs**, which fund HBCUs, MSIs, and other institutions, as well as \$265.6 million for Hispanic-Serving Institutions **Title V programs**. The **TRIO programs** would be provided \$1.3 billion, an increase of \$106.8 million when compared to FY 2023. The budget request would provide \$408 million for the **Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP)**, a \$20 million increase when compared to FY 2023. The **Graduate Assistance in Areas of National Need (GAANN)** program would be flat at \$23.5 million. The **Child Care Access Means Parents In School (CCAMPIS)** program would receive \$95 million, an increase of \$20 million when compared to FY 2023. The **International Education and Foreign Language Studies** programs would be provided \$85.7 million, the same funding the program received in FY 2023.

The **Fund for the Improvement of Postsecondary Education (FIPSE)** would receive \$725 million, an increase of \$541 million over the FY 2023 enacted level to support two current and three new grant programs. The **Postsecondary Student Success Grants program** would receive \$165 million, a \$120 million increase over the FY 2023 enacted level, for grants to support the implementation and evaluation of evidence-based student success strategies to increase student achievement. The **Research Infrastructure Investments for HBCUs, TCUs, and MSIs program** would receive \$350 million to support both planning and implementation grants to promote investments in “research infrastructure, including physical infrastructure and human capital development.” This would be a \$300 million increase over the FY 2023 enacted level. As noted above, the budget request would provide \$150 million for a new **School- and Campus-Based Mental Health Service Grants** program to expand the number of mental health professionals on college campuses and to support programs to strengthen the pipeline of mental health professionals working with young adults. Other new programs within FIPSE proposed by the budget request include: \$30 million for a new **Systemwide Holistic Student Supports Program** to simplify and expand student access to mental health services and \$30 million for a new **Postsecondary Advancement and Success Technical Assistance Center** to build capacity at institutions to improve “postsecondary equity, access, persistence, retention, and completion.”

The request also asks for *Higher Education Act* (HEA) pooled evaluation authority to improve data collection and conduct rigorous research and evaluations of ED’s postsecondary programs, which was first proposed in the FY 2023 president’s budget request. The budget request also proposes \$90 million over ten years in mandatory spending to support **free community college** for students enrolled in high-quality programs and \$30 million in mandatory spending to **subsidize tuition at HBCUs and MSIs** for families earning less than \$125,000 dollars.

Education Research

The FY 2024 budget request would provide \$870.8 million for the **Institute of Education Sciences (IES)**, a \$63 million increase over current levels.

The proposal would include \$291 million for the IES Research, Development, and Dissemination (RDD) account, a \$46.9 million increase over the FY 2023 enacted level. Within the RDD account, the budget request would allocate \$75 million to establish a **National Center for Advanced Development in Education (NCADE)**, which would be dedicated to enabling innovation in teaching and learning through the support of cutting-edge education practices. The budget request emphasizes the Administration’s commitment to supporting high-risk, high-reward education research and calls on IES to utilize new and existing programs, including the development of innovative and scalable education research activities modeled after the IES/NSF Artificial Intelligence (AI) Institute and the Learning Acceleration Challenges, to further support this type of research.



Of note, the request recommends \$2 million to support joint work with the National Science Foundation for the agencies' joint AI Institute on learning. The budget request proposes flat funding for Statewide Longitudinal Data Systems and would set aside \$6 million of the proposed funding to support grants to improve data quality, coordination, and use. Research in Special Education would be flat funded at its FY 2023 enacted level of \$64.3 million and assessments would be funded at \$198.3 million, a \$4 million increase over FY 2023 enacted levels.

Proposed Reductions and Terminations

There were no program cuts or consolidations recommended in the FY 2024 budget request.

U.S. Department of Education *(in thousands of \$)*

	FY 2023 Enacted	FY 2024 Requested	FY 2024 Requested Vs. FY 2023
Elementary and Secondary Education*			
Promise Neighborhoods	91,000	106,000	15,000 (16.5%)
Education Innovation and Research	284,000	405,000	121,000 (42.6%)
IDEA Personnel Preparation	115,000	250,000	135,000 (117.4%)
CTE National programs	32,421	215,421	183,000 (564.5%)
Student Financial Assistance*			
Pell Grant†	7,395	8,215	820 (11.1%)
SEOG	910,000	910,000	--
Federal Work-Study	1,230,000	1,230,000	--



Higher Education

Title V Aid for Developing HSIs	227,751	236,732	8,981 (3.9%)
Promoting Post-Baccalaureate Opportunities for Hispanic Americans	27,314	28,845	1,531 (5.6%)
Strengthening Institutions	122,070	209,007	86,937 (71.2%)
Strengthening Historically Black Colleges (HBCUs)	395,986	402,619	6,633 (1.7%)
Strengthening Asian American- and Native American Pacific Islander-serving Institutions (AANAPISI)	18,589	20,120	1,531 (8.2%)
Strengthening Native American-Serving Nontribal Institutions	11,405	12,120	715 (6.3%)
Title VI International Education and Foreign Language Studies	85,664	85,664	--
TRIO Programs	1,191,000	1,297,761	106,761 (9.0%)
GEAR UP	388,000	408,000	20,000 (5.2%)
GAANN	23,547	23,547	
Teacher Quality Partnerships	70,000	132,092	62,092 (88.7%)
Augustus F. Hawkins Centers of Excellence	15,000	30,000	15,000 (100.0%)
Child Care Access Means Parents in Schools	75,000	95,000	20,000 (26.7%)



Institute of Education Sciences	807,605	870,868	63,263 (7.83%)
Research, Development and Dissemination	245,000	291,877	46,877 (19.1%)
Research in Special Education	64,255	64,255	--
Regional Education Laboratories	58,733	60,733	2,000 (3.4%)
Statewide Longitudinal Data Systems	38,500	38,500	--

† Categories included for ease of reading the chart.

‡ The Pell Grant is listed as the total maximum grant award an individual could receive, including mandatory and discretionary funding. It is *not* listed in thousands of dollars.

The amounts shown for FY 2022 enacted are taken from the Consolidated Appropriations Act, 2022 (P.L. No. 117-103) and related explanatory statements.

Sources: ED's FY 2024 Budget Summary is available at

<https://www2.ed.gov/about/overview/budget/budget24/summary/24summary.pdf> and ED budget justifications can be found at <https://www2.ed.gov/about/overview/budget/budget24/justifications/index.html>.

The President’s FY 2024 budget request would fund DOE at a level of \$52 billion, a \$5.8 billion or 11 percent increase compared to FY 2023 appropriations.

Quick Take: The budget request proposes increases to all DOE fundamental and applied energy programs. The highest priority is on advancing early-stage clean energy research, emerging technologies, and construction of world-class science facilities within the Office of Science. DOE proposes more modest increases than prior years for applied energy programs, but continues to push for major increases to offices that help manage demonstration projects funded through the bipartisan infrastructure bill. The biggest new investments are in cross-cutting efforts, like the Energy Earthshots and Net Zero Gamechangers Initiative, that advance the Biden Administration’s goal of achieving net zero emissions for the electricity sector by 2035 and economy-wide by 2050. Within the National Nuclear Security Administration (NNSA), the Stockpile Research, Technology, and Engineering program, which funds major university programs, would grow by \$286 million or 9 percent compared to FY 2023 appropriations.

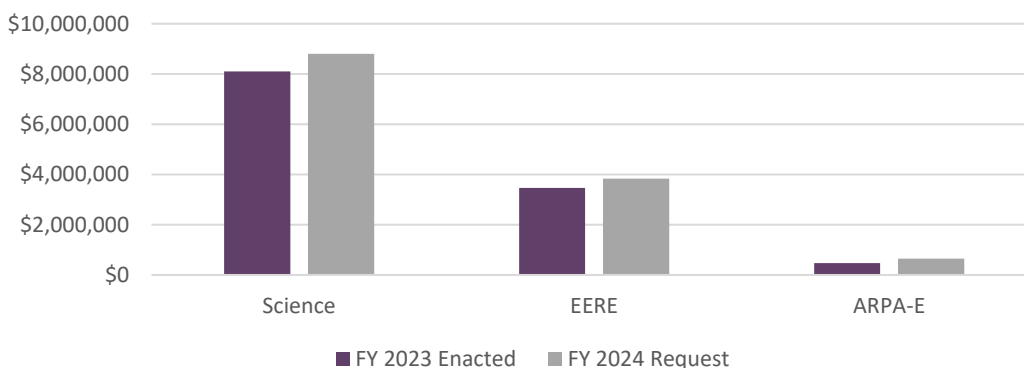
Major Cuts/Eliminations: The only major cut proposed is to nuclear energy. However, major nuclear reactor demonstration projects and advanced nuclear fuel availability projects are funded through the *Infrastructure Investment and Jobs Act* and the *Inflation Reduction Act*. Funding for nuclear research and development would increase, including a proposed \$16 million or 13 percent increase for university research programs.

New Initiatives/Priorities: The budget request proposes launching four new Microelectronics Science Research Centers as authorized in the *CHIPS and Science Act*, four new Fusion Energy R&D Centers, and additional Energy Earthshot Research Centers. DOE also proposes increased funding for the Reaching a New Energy Sciences Workforce (RENEW) and Funding for Accelerated, Inclusive Research (FAIR) initiatives to increase participation and retention of individuals from underrepresented groups in DOE research activities. ARPA-E would be funded at \$650 million to fund new programs in climate change adaptation, mitigation, and resilience as well as the five priority areas in the Net Zero Game Changers Initiative. DOE also plans to launch a new DOE Foundation—the Foundation for Energy Security and Innovation—to help commercialize new energy and emerging technologies.

The Bottom Line

DOE plans to significantly increase research and development funding to support Energy Earthshots, fusion energy, and microelectronics. DOE also plans to continue major investments in other emerging technologies including quantum information science, artificial intelligence, and biotechnology. DOE is committed to growing research capacity at Minority Serving Institutions and increasing STEM participation from under-represented groups.

One-Year Enacted Funding Levels
(in thousands of \$)



New or Signature Initiatives

Microelectronics Science Research Centers

Consistent with the *CHIPS and Science Act*, the budget request includes \$100 million to launch four Microelectronics Science Research Centers. Similar to the National Quantum Science Research Centers, each would be funded at \$25 million a year over five years and these National Lab-led multi-disciplinary centers would pull together teams of research universities, national laboratories, and industry to accelerate research activities focused on addressing the foundational challenges in design, development, characterization, prototyping, demonstration, and fabrication of microelectronics. The goal is to foster a “co-design innovation ecosystem in which materials, chemistries, devices, systems, architectures, algorithms, and software are developed in a closely integrated fashion.”

Fusion Energy R&D Centers

Consistent with the Fusion Energy Sciences Long Range Plan, the budget request includes \$40 million to launch four new Fusion Energy R&D Centers focused on addressing the biggest scientific challenges in deploying a fusion power plant. Each multi-institutional, multi-disciplinary centers would focus on a different topic: Blanket/Fuel Cycle, Advanced Simulations, Structural/Plasma Facing Materials, and Enabling Technologies.

Energy Earthshot Research Initiative

The budget request includes an additional \$75 million for a total of \$175 million to fund the Energy Earthshot Research Initiative. This includes \$50 million to launch up to 16 additional Energy Earthshot Research Centers focused on the six existing topic areas—hydrogen, long duration storage, carbon negative technologies, enhanced geothermal, floating offshore wind, and industrial heat—as well as new topic areas that may be announced in the coming year. These DOE National Lab-led multi-disciplinary centers would pull together teams of research universities, national laboratories, and industry to address research challenges at the interface of basic and applied research with a lot of input and direction from the applied energy offices and hence more attention to translational science. Each center would be funded between \$3 million and \$5 million per year over four years. An additional \$25 million would be set aside for single Principal Investigator and small groups awards in the Energy Earthshot topic areas.

RENEW and FAIR

The budget request includes an additional \$47 million for the RENEW program, including the launch of a new graduate fellowship program. DOE plans to issue a third funding solicitation to provide undergraduate and graduate training and research opportunities for students and academic institutions currently underrepresented in the Office of Science portfolio. This opportunity is primarily for non-R1 institutions of higher education and Minority Serving Institutions in partnership with DOE National Laboratories to access unique user facilities and science infrastructure. The budget request also proposes an additional \$13 million for FAIR for a second solicitation to support research and infrastructure on clean energy, climate, and other Office of Science research areas at Minority Serving Institutions, including underserved and environmental justice regions. DOE provides support to single Principal Investigators or small groups as well as for equipment and other infrastructure improvements. The majority of funds directly support Minority Serving Institutions, but a portion may fund partnering institutions, such as research universities and national laboratories.

ARPA-E and Applied Energy Programs

Major new or expanded areas of investment for ARPA-E technology programs and applied energy programs would be to support the Net-Zero Gamechangers Initiative five priority areas: net-zero low greenhouse gas building heating and cooling; net-zero aviation; net-zero power grid and electrification; industrial products and fuels for a net-zero, circular economy; and fusion energy at scale.

Foundation for Energy Security and Innovation

Consistent with the *CHIPS and Science Act*, in September 2023, DOE plans to launch a DOE Foundation—the Foundation for Energy Security and Innovation (FESI)—to help fill a gap in successfully transitioning new energy and emerging technologies into the market. The budget request includes a one-time appropriation of \$31 million to help launch the Foundation. As a nonprofit foundation, FESI would channel private-sector investments to help support the creation, development and commercialization of next generation energy and emerging technologies across the country. This type of foundation would help capitalize on the federal government’s investments in clean energy research and development by attracting private sector investment and partnership, as well as philanthropic donations. In particular, the FESI would pool resources to support innovative teams from industry, universities, national laboratories, state energy offices and incubators to commercialize new energy technologies. FESI would also help unlock and guide the untapped intellectual property held at DOE-funded national laboratories and research universities beyond just clean energy technologies to a broader portfolio of technologies to address national security, environmental, manufacturing, and other areas of U.S. competitiveness.

Department of Energy (in thousands of \$)

	FY 2023 Enacted	FY 2024 Request	FY 2024 Request v. FY 2023 Enacted
DOE, Total	46,243,359	52,000,000	5,756,641 (11.1%)
Science	8,100,000	8,800,400	700,400 (8.6%)
Advanced Scientific Computing Research	1,068,000	1,126,000	58,000 (5.4%)
Basic Energy Sciences	2,534,000	2,692,900	158,900 (6.3%)
Biological and Environmental Research	908,685	931,700	23,015 (2.5%)
Fusion Energy Sciences	763,222	1,010,500	247,278 (32.4%)
High Energy Physics	1,166,000	1,226,300	60,300 (5.2%)
Nuclear Physics	805,196	811,400	6,204 (0.8%)

Department of Energy



Isotope R&D and Production	109,451	173,100	63,649 (58.2%)
Accelerator R&D and Production	27,436	34,300	6,864 (25.0%)
Workforce Development for Teachers and Scientists	42,000	46,100	4,100 (9.8%)
Science Laboratories Infrastructure	280,700	322,000	41,300 (14.7%)
Clean Energy Demonstrations	89,000	215,300	126,300 (141.9%)
Grid Deployment*	64,707	106,600	41,893 (64.7%)
Manufacturing and Energy Supply Chains	19,000	179,490	160,490 (844.7%)
EERE	3,460,000	3,826,116	366,116 (10.6%)
Hydrogen and Fuel Cell Technologies	170,000	163,075	-6,925 (4.1%)
Bioenergy Technologies	280,000	323,000	43,000 (15.4%)
Solar Energy Technologies	318,000	378,908	60,908 (19.2%)
Wind Energy Technologies	132,000	385,000	253,000 (191.7%)
Geothermal Technologies	118,000	216,000	98,000 (83.1%)
Water Power Technologies	179,000	229,769	50,769 (28.4%)
Vehicle Technologies	455,000	526,942	71,942 (15.8%)
Building Technologies	332,000	347,841	15,841 (4.8%)
Industrial Efficiency & Decarbonization+	266,500	394,245	127,745 (47.9%)
Advanced Materials & Manufacturing Technologies+	183,500	241,197	57,697 (31.4%)
ARPA-E	470,000	650,200	180,200 (38.3%)
Electricity*	285,293	297,475	12,182 (4.3%)

Cybersecurity, Energy Security, and Emergency Response	200,000	245,475	45,475 (22.7%)
Nuclear Energy	1,773,000	1,562,620	-210,380 (11.9%)
Fossil Energy and Carbon Management	890,000	905,475	15,475 (1.7%)
National Nuclear Security Administration	22,162,564	23,845,000	1,682,436 (7.6%)
Weapons Activities	17,116,119	18,832,947	1,716,828 (10.0%)
Defense Nuclear Non-proliferation	2,490,000	2,508,959	18,959 (0.8%)

* Congress appropriated \$350 million for the Office of Electricity in FY 2023, but DOE transferred \$64.7 million out of the Office of Electricity to establish and fund the new Grid Deployment Office.

† In FY 2023, DOE reorganized the Advanced Manufacturing Office into two separate offices—the Industrial Efficiency and Decarbonization Office and the Advanced Materials and Manufacturing Technologies Office.

Sources: DOE FY 2024 budget documents can be found [here](#).



At the time of this writing, the EPA FY 2024 budget justification was not available. The analysis below reflects the information that is available in the EPA Budget in Brief.

President Biden’s FY 2024 budget request proposes \$12.1 billion for EPA, an increase of \$1.9 billion or 19.2 percent above the FY 2023 enacted level.

Quick Take: The Biden Administration’s FY 2024 budget request for EPA proposes significant increases across most of its regular programs, with special emphases on climate change, environmental justice (EJ), and infrastructure. The EPA Science and Technology (S&T) Account, which funds research to support EPA’s mission, would receive \$967.8 million, a \$165.6 million or 20.6 percent increase over the FY 2023 enacted level.

Major Cuts/Eliminations: In line with the FY 2023 budget request, the FY 2024 proposal would eliminate funding for the Water Quality Research and Support Grants. The Administration sees the objective of this congressionally directed program, which was funded at \$9.5 million in FY 2023, as duplicative of other activities and would prefer to support water-focused research and capacity-building efforts out of other discretionary programs.

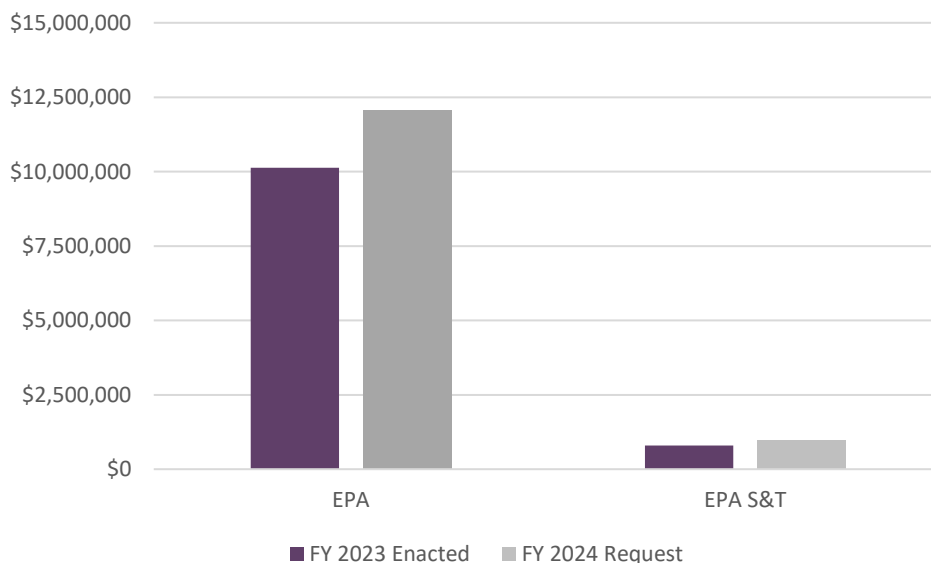
New Initiatives/Priorities: For the first time, the FY 2024 budget request is structured to reflect the cross-agency strategies and goals included in the FY 2022 – 2026 EPA Strategic Plan, which frames many of EPA’s programs to address pollution as a part of the government-wide Cancer Moonshot initiative. In addition, the budget request emphasizes the necessity for EPA to balance longstanding regulatory obligations with new demands from recently passed one-time funding bills. On a similar note, this year’s budget request includes a supplemental funding section, which describes how the FY 2024 budget request relates to the \$60 billion provided to EPA in the *Infrastructure Investment and Jobs Act* (IIJA) and the \$41.5 billion provided by the *Inflation Reduction Act* (IRA).

The Bottom Line

The FY 2024 budget request demonstrates EPA’s continued priority in implementing the Biden Administration’s policy agenda, which focuses on advancing efforts to combat climate change, environmental injustice, and pollution while prioritizing equity across all programs. As EPA has been flooded with supplemental funds from the IIJA and the IRA, we should expect additional scrutiny from Congress regarding requested funding increases for EPA’s base budget. Despite proposed significant increases for the S&T account, we expect extramural research programs to continue to be flat funded and highly targeted towards EPA’s mission.



Environmental Protection Agency
(In Thousands of \$)



New and Signature Initiatives

Internal Workforce Capacity: The FY 2024 budget request proposes hiring up to 2,000 new employees at EPA. While restoring the EPA workforce has been a consistent priority for the Biden Administration, this year’s budget request conveys a greater sense of urgency given the expansion of EPA’s responsibilities and significant infusion of funding from the FY 2022 and 2023 regular appropriations packages as well as the IJA and the IRA. The request proposes a significant expansion of EPA’s student internship program as a mechanism to quickly increase staffing levels and attract new talent to the agency in key offices, namely overseeing EJ, climate, and infrastructure programs. This program intends to provide opportunities for “underrepresented and underserved populations in support diversity, equity, and inclusion in the federal workforce.”

Climate Change: Similar to FY 2023, the request proposes significant increased support for programs that would reduce greenhouse gas (GHG) emissions, build resilience to climate change-related impacts, and enable communities to respond to climate change. Several of EPA’s signature initiatives funded in the FY 2022 and FY 2023 omnibus packages are also included in this request with significant proposed increases, including programs to phase down the use of hydrofluorocarbons (HFCs), reduce GHG emissions from diesel vehicles, and develop and enforce new emissions standards and guidelines for vehicles as well as the oil and gas sectors. Proposals notable to the research community include:

- \$137.8 million for **air, climate, and energy research**, a 37.2 percent increase over the FY 2023 enacted level. This program would support research to “advance research to assess the impacts of climate change on human health and ecosystems.” This research program received the greatest increase of all programs supported out of the S&T account.
- \$7 million to support competitive **Wildfire Smoke Preparedness Grants**, to be awarded to “tribes, states, public preschools, local educational agencies, and non-profit organizations to better prepare buildings for wildfire smoke.” In addition, EPA will continue to work with the U.S. Forest Service and other federal, state, and community agencies and organizations to “identify ways to improve public notification and reduce the public health risk from air pollution resulting from wildfires.”
- A commitment to continue working with the National Aeronautics and Space Administration (NASA) to prototype a **greenhouse gas monitoring and information system** to integrate data from a variety of sources with the goal of making data more accessible and usable to federal, state, and local governments, researchers, the public, and others.



Environmental Justice: As in FY 2023 and consistent with the EPA’s FY 2022-2026 Strategic Plan, the FY 2024 budget request provides strong support for EJ. The budget supports the implementation of the Biden Administration’s Justice40 Initiative, which aims to direct 40 percent of the benefits of federal investments in climate infrastructure to communities experiencing environmental injustice and proposes to incorporate EJ into many programs across the agency’s portfolio. To this end, the FY 2024 budget request would provide more than \$1.8 billion in EJ-focused investments throughout EPA. While these initiatives are not strictly research-focused, they may involve universities or researchers as partners should there be capacity development, research, or data components to which academia can contribute. Of these proposed funds, those of most relevance to the research community include:

- \$375 million, a \$267 million increase above the FY 2023 enacted level, for the **Environmental Justice Program** to expand support for community-based organizations, indigenous organizations, tribes, states, local governments, and territorial governments in pursuit of identifying and addressing EJ issues through multi-partner collaborations.
- \$100 million to develop and implement a **community air quality monitoring and notification program** to provide real-time data to the public in areas with the greatest exposure to harmful levels of pollution, such as smoke pollution from wildfires.
- \$91 million to build out community-centered **technical assistance hubs** to “support basic capacity building of communities and their partners to advance equity and justice in their communities.”

Ongoing Areas of Interest

The Administration referenced the **Science to Achieve Results (STAR) Program**, EPA’s primary funding mechanism for extramural research and development, in the budget request, however, it did not specify a proposed funding level, likely leaving it to Congress to define this year’s funding level for the program as it has done in the past. The FY 2023 omnibus provided \$28.6 million for the STAR program in the S&T account, flat funding compared to the previous years.

The budget request also recommends that EPA allocate approximately \$170 million to supporting activities to inform the regulation of **per- and polyfluoroalkyl substances (PFAS)**, as outlined in the 2021 PFAS Strategic Roadmap. These activities may include “increasing knowledge of PFAS impacts to human health and ecological effects; restricting use to prevent PFAS from entering the air, land, and water; and remediating PFAS that have been released into the environment.” The budget request would also provide \$350 million for the **Superfund Remedial Program**.

Environmental Protection Agency

(In Thousands)

	FY 2023 Enacted	FY 2024 Request	FY 2024 Request vs. FY 2023
EPA, Total	10,135,433	12,083,273	1,947,840 (19.2%)
Science and Technology	802,276	967,838	165,562 (20.6%)

Sources and additional information:

- EPA’s FY 2024 Budget in Brief is available at <https://www.epa.gov/system/files/documents/2023-03/fy-2024-epa-bib.pdf>.
- EPA’s 2022 – 2026 EPA Strategic Plan is available at <https://www.epa.gov/planandbudget/strategicplan>.

Department of Health and Human Services



The FY 2024 budget request would fund the Department of Health and Human Services (HHS) at \$144.3 billion in discretionary budget authority, an increase of nearly \$17 billion over FY 2023 levels, and \$1.7 trillion in mandatory budget authority. Over 50 percent of the HHS budget authority under the President’s budget request would provide funding for the Medicare program, with another 33 percent for the Medicaid program. Approximately nine percent of the FY 2024 budget request would fund discretionary programs.

Quick Take: The FY 2024 HHS budget continues to build on the Administration’s priorities to increase access to healthcare services and provide long-term solvency to major programs including Medicare. The budget would provide new revenue to increase Medicare solvency for up to 25 years, permanently extend the enhanced premium tax credits, expand the cap on the cost of insulin to include commercial insurance, and increase access to mental health and crisis care services. The budget would provide nearly \$20 billion in mandatory funding across HHS agencies to address lessons learned from the COVID-19 pandemic and prepare for future pandemics, which is less than what was proposed in the FY 2023 budget request. The budget request also focuses on healthcare workforce needs, “Long COVID” treatment, cancer research and drug development in line with the Cancer Moonshot initiative, mental health services, and HIV/AIDS and Hepatitis C prevention.

Major Cuts/Eliminations: The Biden Administration’s proposal does not make major reductions or eliminate vital programs in HHS.

New Initiatives/Priorities: The budget request proposes providing the Administration for Strategic Preparedness and Response (ASPR), Centers for Disease Control and Prevention (CDC), the National Institutes of Health (NIH), and the Food and Drug Administration (FDA) with a total of \$20 billion over five years in mandatory funding to enhance the nation’s public health infrastructure to more effectively respond to future pandemics and other biological threats. The Administration also requests increased funding for “Long COVID” treatment and research at the Health Resources and Services Administration (HRSA) and other agencies. Additionally, the White House proposes reforms to increase access to mental and behavioral health and substance use disorder services through the Centers for Medicare and Medicaid Services (CMS) and through significant investments in discretionary behavioral health and nursing workforce training programs.

The Bottom Line

The White House has proposed continued investments in pandemic preparedness, health workforce training, substance use and opioid use disorder treatment, increased access to healthcare services including behavioral and mental health crises services, and addressing health disparities and inequities. However, proposals such as new revenues to extend the solvency of the Medicare trust fund may fail to garner broad support in Congress, particularly given the impact that debt ceiling negotiations may have on future healthcare spending.

Department of Health and Human Services



National Institutes of Health



The budget request would provide \$48.6 billion for the NIH, an increase of \$920 million, or 1.8 percent, above the FY 2023 enacted level. In addition to this amount, \$2.5 billion is included for the Advanced Research Projects Agency for Health (ARPA-H) available to the agency through FY 2026. This is a \$1 billion increase above the FY 2023 enacted level. The budget also requests \$2.7 billion in mandatory funds for pandemic preparedness activities.

Quick Take: In a tight budget year, the Biden Administration is proposing a small funding increase for the NIH base budget. The proposed funding increases are largely targeted for Biden Administration priorities such as the Cancer Moonshot, precision nutrition, mental health, and health disparities research. The Administration continues to prioritize ARPA-H, its signature health research initiative, and would provide \$2.5 billion for the new agency in FY 2024. Established in March 2022, ARPA-H is an independent agency within NIH with direct reporting to the Department of Health and Human Services (HHS).

Major Cuts/Eliminations: While there are no major cuts or eliminations to programs at NIH, the small increase to the agency results in decreases for many Institutes and Centers after accounting for biomedical research and development inflation.

New Initiatives/Priorities: The priorities in this budget are aligned with the “whole of government” priorities for the Biden Administration. The budget request includes targeted increases for Cancer Moonshot activities, mental health research, nutrition research, and research at the intersection of climate and health. The budget request also once again proposes mandatory funds to support pandemic preparedness efforts across HHS, including \$2.7 billion for such activities at NIH.

The Bottom Line

The Biden Administration’s proposal of \$48.6 billion for the NIH’s base budget would provide a small increase over FY 2023 enacted levels, with funding increases targeted for Biden Administration health research priority topics. Although there is strong bipartisan and bicameral support for the NIH, in a year of constrained spending and debt ceiling negotiations, the path towards a ninth consecutive funding increase for the agency is unclear. ARPA-H continues to have bipartisan support and Congress is likely to continue to support the new agency as it ramps up activity and launches new programs.

Department of Health and Human Services



New and Signature Initiatives

A year after the relaunch of the Cancer Moonshot, the FY 2024 budget request highlights programs and investments that will help address the Administration’s goal of reducing the cancer death rate by 50 percent over the next 25 years. The budget request proposes \$7.8 billion to fund the NCI which includes a \$716 million increase to fund Cancer Moonshot activities. This is a \$500 million increase over FY 2023 Cancer Moonshot funding which is set to expire in FY 2023. With the expiration of Cancer Moonshot funding provided by the *21st Century Cures Act* (Cures), the President’s budget also proposes the extension of Cancer Moonshot funds through the authorization of \$2.9 billion to be used in FY 2025 and FY 2026. In FY 2024, NCI proposes to use these increased funds to focus on doubling accrual to cancer clinical trials, re-envisioning clinical trials to increase access for underserved populations and produce faster results, growing the [Cancer Moonshot Scholars Diversity Program](#), and establishing a comprehensive data ecosystem to share and process cancer data. In addition, NCI will continue to focus on its basic research programs and provide support to existing and new NCI designated cancer centers.

Following the release of the [White House Report on Mental Health Research Priorities](#), the budget request proposes a \$200 million increase for mental health research. This funding would be used to support the following activities at the National Institute of Mental Health (NIMH):

- \$20 million to increase funding on studies that evaluate social media’s impact on mental health;
- \$130 million to improve treatments, accelerate diagnostics, and enhance precision mental health care; and
- \$50 million to support a new Precision Psychiatric Initiative, focused on developing mental health treatments for the individual.

The proposed new Precision Psychiatric Initiative would build on the field of precision medicine and work to produce effective mental health interventions for the individual. The initiative is proposed to launch with a focus on two areas of need— biomarker development and precision diagnostics. For biomarker development, NIH proposes \$20 million to create an “Innovation Funnel Approach to Accelerating Biomarker Development for Depression.” This program is based on the Rapid Acceleration of Diagnostics (RADx) initiative and would develop specific biomarkers to guide treatment for major depression. To address precision diagnostics, the initiative proposes \$30 million to support longitudinal studies that utilize large cohorts of individuals, including the *All of Us* Research Program, to assess behavior along with detailed clinical information and identify relationships between mental health symptoms, biological systems, and day to day lifestyle factors. Both studies will lead to a better understanding of mental disorders and more effective treatments.

The budget request also proposes \$20 billion in mandatory funding for pandemic preparedness of which \$2.69 billion would be allocated to the NIH. The \$2.69 billion requested in FY 2024 would support the following activities at the NIH, largely at the National Institute of Allergy and Infectious Diseases (NIAID):

- Support for preclinical and clinical research on vaccines and therapeutics around 10 viral families of concern;
- Expanding lab capacity for biosafety level 3 and 4 laboratories;
- Support for a network of clinical trial sites that were critical during the COVID-19 pandemic;
- Development of next-generation diagnostics, specifically for at-home diagnostics.

Department of Health and Human Services



Ongoing Areas of Interest

The Administration continues its emphasis on the support of nutrition research at the NIH. The budget request includes \$121 million for the trans-NIH Office of Nutrition Research, an increase of \$120 million over FY 2023 levels. These funds were proposed to execute the Strategic Plan for NIH Nutrition Research and address the nutrition research recommendations from the White House Conference on Hunger, Nutrition, and Health held this past fall. In the FY 2023 budget request, \$97 million was proposed for the office but it was not included in the final FY 2023 omnibus package.

The Administration continues to support NIH's Climate Change and Health Initiative, proposing an increase of \$25 million above FY 2023 enacted levels to boost this research at the National Institute of Environmental Health Sciences (NIEHS).

Consistent with the Biden Administration's "whole of government" emphasis on equity, the FY 2024 budget request proposes \$95 million for health disparities research, available to the National Institute on Minority Health and Health Disparities (NIMHD) and several other NIH Institutes and Centers to sustain the increases seen in FY 2022 and FY 2023 for this research area.

The Administration continues to emphasize research combatting overdose and addiction and the budget proposes \$635.6 million for the ongoing Helping to End Addiction Long-Term (HEAL) Initiative, maintaining the FY 2023 enacted level. The budget request also includes \$270 million, the same as the FY 2023 enacted level, for research related to developing a universal influenza vaccine. In addition, the Administration proposes \$12.5 million for firearm injury research to maintain the FY 2023 enacted level.

Continuing COVID-19 research also remains a priority for the Biden Administration. Following the successful development of COVID-19 vaccines and therapeutics, the Administration is shifting its focus to the long-term effects of the COVID-19 pandemic. This includes addressing Long COVID through the NIH's Researching COVID to Enhance Recovery (RECOVER) initiative and investigating the mental health effects of the pandemic. The budget request proposes \$25 million for the research studies on the impact of COVID-19 on mental health and \$65 million for the Community Engagement Alliance (CEAL) Against COVID-19 Disparities program. Both requests would sustain the FY 2023 enacted levels.

The Biden Administration would retain the investigator salary cap at Executive Level II.

Advanced Research Projects Agency for Health (ARPA-H)

The FY 2024 budget request proposes to fund ARPA-H at \$2.5 billion, \$1 billion above the FY 2023 enacted level. These funds would be available through FY 2026 and were requested to continue the support of the agency's launch. In March 2022, ARPA-H was established as an independent agency within NIH, granting the agency the flexibility it needs to take larger risks that can advance innovative biomedical breakthroughs.

In FY 2024 ARPA-H will continue to focus on the launch of its inaugural programs, building up personnel including the hiring of program managers and mission office directors, and finalizing the operational tasks needed to fully execute the agency's mission. The inaugural ARPA-H Director, Dr. Renee Wegrzyn, has stated the agency's immediate goals are building out its mission offices and recruiting up to 25 program managers in 2023. These program managers will lead programs that align with the four focus areas of ARPA-H: Health Science Futures, Scalable Solutions, Proactive Health, and Resilient Systems. The agency will also contribute to the Cancer Moonshot by designating a Cancer Moonshot Champion to identify internal efforts across ARPA-H that will advance the goals of the Cancer Moonshot initiative.

Department of Health and Human Services



National Institutes of Health (in millions)

	FY 2023 Enacted	FY 2024 Request	FY 2024 Request vs. FY 2023 Enacted
NIH, Total	47,469	48,598	920 (1.9%)
National Cancer Institute (NCI)	7,317	7,820	503 (6.9%)
National Heart, Lung, and Blood Institute (NHLBI)	3,985	3,985	--
National Institute of Dental and Craniofacial Research (NIDCR)	520	520	--
National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)	2,303	2,303	--
National Institute of Neurological Disorders and Stroke (NINDS)	2,809	2,825	16 (0.6%)
National Institute of Allergy and Infectious Diseases (NIAID)	6,562	6,562	--
National Institute of General Medical Sciences (NIGMS)	3,240	3,240	--
Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD)	1,748	1,748	--
National Eye Institute	896	896	--
National Institute of Environmental Health Sciences (NIEHS)	914	939	25 (2.7%)
National Institute on Aging (NIA)	4,412	4,412	--
National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS)	688	688	--

Department of Health and Human Services



National Institutes of Health (in millions)

National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS)	688	688	--
National Institute on Deafness and Other Communications Disorders (NIDCD)	534	534	--
National Institute of Mental Health (NIMH)	2,342	2,542	200 (8.5%)
National Institute on Drugs and Addiction (NIDA)	1,663	1,663	--
National Institute on Alcohol Effects and Alcohol-Associated Disorders (NIAAA)	597	597	--
National Institute on Nursing Research (NINR)	198	198	--
National Human Genome Research Institute (NHGRI)	661	661	--
National Institute of Biomedical Imaging and Bioengineering (NIBIB)	441	441	--
National Institute on Minority Health and Health Disparities (NIMHD)	525	525	--
National Center for Complementary and Integrative Health (NCCIH)	170	170	--
National Center for Advancing Translational Sciences (NCATS)	923	923	--
John E. Fogarty International Center (FIC)	95	95	--
National Library of Medicine (NLM)	495	495	--
Office of the Director (OD)	2,647	2,898	251 (9.5%)

Department of Health and Human Services



National Institutes of Health (in thousands)

Building Facilities	350	350	--
Common Fund	735	735	--
Advanced Research Projects Agency for Health (ARPA-H)*	1,500	2,500	1,000 (66.7%)

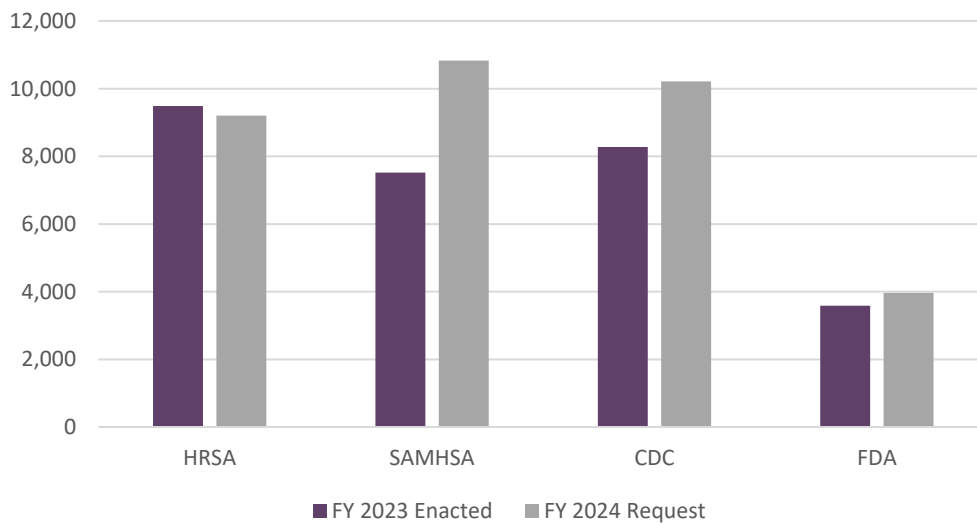
*Note that \$1 billion provided for ARPA-H in the omnibus was not included in the total amount provided to NIH.

**Note that \$12.1 billion proposed for pandemic preparedness would be included as mandatory funding and is not included in the agency's base discretionary budget.

Department of Health and Human Services



Department of Health and Human Services (HHS)
(In Millions of \$)



Health Resources and Services Administration (HRSA)

The FY 2024 budget request would provide \$15.9 billion for the **Health Resources and Services Administration (HRSA)**. The agency would receive \$9.2 billion in discretionary budget authority, a \$282 million decrease compared to FY 2023 enacted levels. However, the FY 2023 enacted level includes nearly \$1.5 billion in Congressionally Directed Spending projects, which are not included in the budget request, appearing as a proposed cut.

The proposal would provide HRSA with \$7.1 billion for **health centers**, which includes \$5.2 billion in mandatory funding, and \$2.7 billion in total funding for HRSA's **workforce programs**. The largest allocation would go to **Behavioral Health Workforce Development** programs at \$387 million, which includes the **Behavioral Health Workforce Education and Training Program**, representing a \$190 million increase above FY 2023 enacted levels. The **National Health Service Corps** would receive \$966 million in new funding, a \$548 million increase over FY 2023 levels, with nearly \$790 million in proposed mandatory funding. **Nursing Workforce Development** programs would receive \$350 million, a \$50 million increase over FY 2023 levels. The budget request proposes \$27.5 million for the new **Health Care Workforce Innovation Program**, which aims to develop new approaches to recruiting, supporting, and training providers to grow the healthcare workforce and address ongoing professional shortages. It would also allocate \$25 million in new funding to the **Supporting the Mental Health of the Health Professions Workforce** program, which aims to advance burnout prevention and resilience initiatives in line with authorized programs under the *Dr. Lorna Breen Health Care Provider Protection Act*.

The **Maternal and Child Health Block Grant** would receive an increase of \$937 million, \$121.6 million over the FY 2023 enacted level. With funding through **Special Projects of Regional and National Significance (SPRANS)** awards, the Administration continues to place emphasis on maternal mortality and morbidity, reducing health disparities, and issues relating to the COVID-19 pandemic.

Department of Health and Human Services



The budget proposal builds on the Administration’s priority to address **Long COVID**, including \$130 million to provide holistic, integrated support to patients diagnosed with Long COVID. The program would focus on supporting uninsured, low-income, and racial and ethnic minority populations that have suffered disproportionately from COVID-19 and aims to increase capacity in states to provide clinical care to Long COVID patients. In addition, the HRSA **Long COVID Support Program** would support two main components: (1) funding to states, or non-profit organizations if a state decides not to apply to implement or enhance integrated diagnostics and care units of the most complex patients; and (2) funding for provider training, capacity building, and consultation to support primary care providers.

The budget would provide \$416 million for **Rural Health programs**, \$63 million above FY 2023 enacted levels. The **Rural Communities Opioid Response Program (RCORP)** would receive \$165 million, equal to the FY 2023 budget request and a \$20 million increase over the FY 2023 enacted level.

Centers for Disease Control and Prevention (CDC)

The FY 2024 budget request would fund the **Centers for Disease Control and Prevention (CDC)** at \$10.2 billion in discretionary budget authority, an increase of roughly \$1.9 billion compared to the FY 2023 enacted level. The CDC budget request proposes a significant reorganization of the agency’s budget structure, combining 13 different accounts into a single “CDC-Wide Activities and Program Support” account, which aims to facilitate a more efficient response to future public health emergencies. Under the Administration’s proposal, CDC would receive \$6.1 billion as part of the \$20 billion in mandatory funding that would be allocated across HHS for pandemic preparedness and biosafety efforts. The request also proposes \$1 billion in mandatory funding to establish a **Vaccines for Adults program** and a \$1.6 billion increase in mandatory funding for the **Vaccines for Children program**.

The budget request proposes significant increases to many of CDC’s ongoing initiatives aimed at improving public health capacity at the national, state, and local level, including \$340 million for the **Data Modernization Initiative**, near double the FY 2023 enacted level; \$100 million for the Center for Forecasting and Outbreak Analytics, double the FY 2023 enacted level; \$106 million for **public health workforce training and fellowship programs**, a \$35 million increase; and a \$5 million increase to support **public health laboratory science** and accelerate development of therapeutics and diagnostics.

The CDC budget also requests increased funding for many of its disease-oriented and community health programs, including a \$90 million increase above the FY 2023 enacted level for the **Ending the HIV Epidemic** initiative; \$212 million for antimicrobial resistance efforts, a \$15 million increase; \$268 million to implement the **Youth and Community Violence Intervention** initiative; \$187 million for **environmental health programs**, a \$174 million increase, including \$35 million to address environmentally-related cancers; \$100 million for the **Social Determinants of Health** program, a \$92 million increase; and \$35 million for **firearm injury and mortality research**, a \$22.5 million increase.



Administration for Strategic Preparedness and Response (ASPR)

The FY 2024 budget request proposes funding the newly elevated **Administration for Strategic Preparedness and Response (ASPR)** at \$4.3 billion, a \$642.2 million increase over the FY 2023 enacted level. In July 2022, ASPR was elevated to a standalone agency within HHS; its elevation and significant proposed funding increase in the FY 2024 budget request aligns with the Biden Administration’s emphasis on pandemic preparedness and response. Included in the recommended increased funding for the agency, the Biden Administration would provide \$400 million in new funding to support **Pandemic Preparedness and Biodefense**. This funding would support the enhanced pandemic preparedness and response measures proposed in the National Biodefense Strategy and would invest in the acceleration and advanced development of vaccines, therapeutics and diagnostics; support rapid manufacturing of medical countermeasures; and expand and sustain domestic medical supply chains. The budget request also proposes funding Advanced Research and Development at the **Biomedical Advanced Research and Development Authority (BARDA)** at \$1.02 billion, an increase of \$65.1 million over the FY 2023 enacted level. The proposed increase aims to assist BARDA’s efforts to produce vaccines, therapeutics, diagnostics, and other tools against virulent diseases. The request emphasizes that the agency should focus on tools that are “disease agnostic.” In addition to the discretionary funding request for ASPR, the FY 2024 budget request would provide \$10.5 billion to the agency in mandatory funding as a part of the \$20 billion requested across HHS to prepare for pandemics and other biological threats. The funding would support additional research and development of vaccines, technologies for bio-surveillance and early warning, therapeutics, and diagnostics; bolster domestic manufacturing capacity and the supply chain for medical countermeasures; and support training for the public health workforce.

Food and Drug Administration (FDA)

The **Food and Drug Administration (FDA)** would receive \$7.2 billion in FY 2023, including nearly \$4 billion in discretionary budget authority and \$3.3 billion in user fees. With FDA in the national spotlight over the last year due to infant formula shortages that became severe in 2022, the budget calls for increased funding to augment the agency’s capacity to prevent and respond to outbreaks. The budget request acknowledges the agency’s recent proposal to establish an **FDA Human Foods Program** as a consolidated division of FDA responsible for maintaining the safety and nutritional value of the food supply and calls for additional support for **food safety and nutrition oversight** as FDA works to implement this restructuring. The budget request also seeks to align FDA with the Administration’s goals established in the September 2022 **White House Conference on Hunger, Nutrition, and Health** and accompanying National Strategy by requesting \$12 million for nutrition and labeling efforts. Also new in the budget request, the Administration would provide \$5 million to support **food supply chain continuity**, and \$64 million to broadly support safe and healthy foods by focusing on oversight of infant formula, reducing exposure to toxic chemicals in the food supply, and “empowering consumers to make healthier food choices.”

The budget would provide \$4.6 billion for **medical product safety** across discretionary and user fee funding, a \$200 million or 4.6 percent increase above the FY 2023 enacted level. Within this amount, FDA would receive \$102.5 million to address the **opioid epidemic**, a \$23 million increase; \$7.5 million for **Accelerating Access to Critical Therapies for ALS (ACT for ALS)**, a \$2.5 million increase; and \$21.6 million for the **Resilient Supply Chain and Shortages Program for medical devices**, an \$11.6 million increase. Additionally, FDA would receive \$50 million, a \$48 million increase over the FY 2023 enacted level, for the **Cancer Moonshot** initiative, specifically to support greater diversity in clinical trials and allow for more efficient review and approval of new cancer treatments.



FDA is among the HHS agencies that would receive mandatory funding for **pandemic preparedness**, with \$670 million proposed to enhance regulatory capacities and infrastructure. FDA also outlined its legislative proposals for the upcoming reauthorization of the *Pandemic and All-Hazards Preparedness Act (PAHPA)*, most of which seek to enhance FDA's ability to respond to food, drug, and device shortages through improved communication and coordination with manufacturers. The proposals would also allow FDA to conduct remote regulatory assessments and would establish a program within the Center for Biologics Evaluation and Research to support domestic defense against emerging pathogens.

Substance Use and Mental Health Services Administration (SAMHSA)

The FY 2024 budget request proposes funding the **Substance Use and Mental Health Services Administration (SAMHSA)** at \$10.8 billion, nearly \$3.3 billion above the FY 2023 enacted level. This includes \$28 million, an increase of \$12 million over FY 2023 enacted levels, which would expand the **Prevent Prescription Drug/Opioid Overdose Related Deaths (PDO) grant program**. The program aims to reduce prescription drug and opioid overdose deaths by training first responders and community-based professionals on prevention and harm reduction strategies. The budget request would also provide \$2 billion for the **State Opioid Response (SOR)** grant programs, an increase of \$425 million over FY 2023 enacted levels.

Additionally, the **Certified Community Behavioral Health Clinics (CCBHCs) Expansion Grant program** would receive \$552.5 million, an increase of \$167.5 million over FY 2023 levels, to establish an accreditation process through which CCBHCs must adhere to in order to ensure that children and adults are able to access comprehensive behavioral healthcare services. In line with the Biden Administration's efforts to address youth mental health, the FY 2024 budget request would provide \$244 million for **Project AWARE**, an increase of \$104 million above FY 2023 enacted levels. Project AWARE funding supports training for teachers, parents, first responders, and other adults who interact with youth to recognize and respond to the signs of mental health and substance use issues. The budget request would expand the scope of Project AWARE to include additional populations such as college students and adults. The budget request also proposes \$37.5 million for the **Infant and Early Childhood Mental Health grant program**, an increase of \$22.5 million above the FY 2023 enacted level, to expand access to evidence-based and culturally appropriate early childhood mental health services.

Notably, the budget request would double funding levels for SAMHSA's **Minority Fellowship Program (MFP)** over the FY 2023 enacted level to \$36.7 million and would provide support for additional mentoring opportunities through MFP to promote the diversification of the behavioral health workforce. The budget request would also include \$15.8 million for **Mental Health Practice Improvement and Training** efforts that would establish a training and workforce pipeline from institutions of higher education to underrepresented communities.

Centers for Medicare and Medicaid Services (CMS)

The **Centers for Medicare and Medicaid Services (CMS)** is estimated to spend \$1.5 trillion in FY 2024 in mandatory and discretionary funds, a net decrease of \$38 billion below FY 2023 enacted levels. Approximately 59 percent of the funds CMS spends are dedicated to the Medicare program, with 38 percent of the federal share for state Medicaid programs.

Department of Health and Human Services



In the budget request, the Administration proposes new revenues that are estimated to extend the Medicare Part A Hospital Trust Fund by nearly 25 years without cutting benefits. Additionally, the budget includes \$8 billion to enhance Medicare benefits, such as diabetes prevention, expanding access to behavioral health services and community health workers, improving the quality and safety of long-term services, and advancing health equity. The Administration is proposing to create a Pre-Exposure Prophylaxis (PrEP) Delivery Program, which would guarantee PrEP and associated services at no cost to uninsured and underinsured individuals, as well as expanding the number of providers serving underserved communities. This program aligns with the Administration's priority of ending the HIV epidemic. The budget request would also increase access for Medicaid and the Childrens Health Insurance Program (CHIP) beneficiaries by requiring states to cover PrEP and associated laboratory services with no cost sharing.

The budget request aligns with the Biden Administration's call for the creation of a new national program to eliminate Hepatitis C, which would include Medicare. Part D beneficiaries would be able to receive treatment to cure the disease with no cost sharing. The budget request would permanently extend the enhanced *Affordable Care Act* premium tax credits that were initially extended under the *Inflation Reduction Act* (IRA), and further builds on the IRA by expanding the \$35 cap per monthly insulin product provided to Medicare beneficiaries in the IRA to individuals with group and individual market coverage.

The budget request proposes allowing Medicare to identify and designate additional health care professionals, including clinical social workers, peer support workers, and certified addiction counselors, who could enroll in Medicare and be reimbursed when providing mental and behavioral health services that would otherwise be covered when provided by a physician. As with most items included in the budget request, Congress will determine which of these proposed changes are realized.

Agency for Healthcare Research and Quality (AHRQ)

The FY 2024 budget request would provide the **Agency for Healthcare Research and Quality (AHRQ)** with \$447.5 million in discretionary funds, a \$74 million increase over the FY 2023 enacted level. The request includes a transfer of \$116 million in mandatory funding, as in previous years, from the Patient-Centered Outcomes Research Trust Fund. The request would provide \$19 million for **Long COVID care delivery research**, an increase of \$9 million over FY 2023 enacted levels. The bill would also provide \$7.4 million for ongoing efforts to establish **all payer-claims databases (APCDs)**, and \$20 million for **diagnostic safety research** to prevent errors and delays in diagnoses.

The budget request would also provide \$59 million for **investigator-initiated general research grants**, including \$3 million for health equity research in healthcare delivery, \$11 million for **primary care research**, and \$7 million in new funding to support **opioid and polysubstance research grants**. Additionally, the request would provide \$2 million to establish **Centers of Excellence in Telehealthcare Implementation**. The budget request would also provide \$7.4 million in new funding for AHRQ's contribution to the HHS-wide **Improving Maternal Health Initiative**, which would focus on expanding states' capacity to link local and federal healthcare, vital statistics, and social service data, as well as using predictive analytics to improve maternal health and overall health outcomes.

Department of Health and Human Services



Administration for Community Living (ACL)

Under the budget proposal, the **Administration for Community Living (ACL)** would receive \$3 billion in FY 2024, an increase of \$490 million above the FY 2023 enacted level. The **nutrition services** program would receive the largest increase at \$217.6 million over FY 2023 levels, aligned with the Biden Administration’s priorities established in the September 2022 White House Conference on Hunger, Nutrition, and Health. The **National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR)** would receive level funding of \$119 million. The **University Centers for Excellence in Developmental Disabilities** program would receive \$46 million, a \$3 million increase above the FY 2023 enacted level.

Administration for Children and Families (ACF)

The budget request would provide \$94.4 billion for the **Administration for Children and Families (ACF)**, a \$23.6 billion increase above the FY 2023 enacted level, including \$55 billion in mandatory funding. Of this proposed increase, \$14.9 billion would be for new **Early Care and Education Proposals**. Under the proposal, **Head Start** programs would receive \$13.1 billion, a \$1.1 billion increase over FY 2023 enacted levels. **Family Violence Prevention and Services programs** would receive \$492 million, a \$252 million increase over FY 2023 enacted levels. **Child Welfare Research, Training, and Demonstration** programs would receive an \$82 million increase for a total of \$101 million, while **Social Services Research and Demonstration programs** would receive a \$105 million cut for a total of \$37.5 million.

Office of the Secretary

Located within the Office of the Secretary, the **Office of Minority Health (OMH)** would receive \$85.8 million, a \$11 million increase over the FY 2023 enacted level. In FY 2024, OMH plans to award grants or cooperative agreements that would support community-based perinatal health services, language access services, and community-driven approaches that address factors that contribute to health disparities, among others. The **Office of Women’s Health (OWH)** would receive \$44 million, equal to the FY 2023 enacted level. OWH’s stated FY 2024 priorities include an increased focus on prevention and treatment of eating disorders, violence, substance use disorders, and cancers that disproportionately impact women, especially in underserved communities. The **Office of the National Coordinator for Health IT (ONC)**, the lead for health information technology policy development, would receive \$104 million, an increase of \$37 million over the FY 2023 enacted level. The funds would support ONC’s policy development and coordination efforts; enable updates to interoperability standards; and build on the new Trusted Exchange Framework and Common Agreement (TEFCA), a public-private national network for the secure exchange of electronic health information.

Department of Health and Human Services



Department of Health and Human Services (in millions of \$)

	FY 2023 Enacted	FY 2024 Request	FY 2024 Request vs. FY 2023
Health Resources and Services Administration (HRSA)*	9,487	9,205	-282 (2.8%)
Title VII	579	809	230 (39.7%)
Title VIII	306	350	44 (14.4%)
Substance Use and Mental Health Services Administration (SAMHSA)	7,518	10,834	3,316 (44.1%)
Mental Health Services	2,789	4,942	2,153 (77.2%)
Substance Use Treatment	4,157	5,463	1,306 (31.4%)
Substance Use Prevention	237	246	9 (3.8%)
Agency for Healthcare Research and Quality (AHRQ)	374	448	74 (19.8%)
Centers for Disease Control and Prevention (CDC)	8,281	10,217	1,936 (23.4%)
Chronic Disease Prevention and Health Promotion	1,430	1,814	384 (26.9%)
National Institute for Occupational Safety and Health (NIOSH)	363	363	--
Environmental Health	247	421	174 (70.5%)
Pandemic Preparedness (Mandatory)	0	6,100	6,100 (100%)

Department of Health and Human Services



Administration on Community Living (ACL)	2,538	3,028	490 (19.3%)
National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR)	119	119	--
Administration for Children and Families (ACF)	70,747	94,375	23,628 (33.4%)
Office of the National Coordinator for Health IT (ONC)	66	104	38 (57.6%)
Food and Drug Administration (FDA), Direct Appropriation	3,591	3,963	372 (10.4%)
Pandemic Preparedness (Mandatory)	0	670	670 (100%)
Administration for Strategic Preparedness and Response (ASPR)	3,630	4,272	642 (17.7%)
Biomedical Advanced Research and Development Authority (BARDA)	950	1,015	65 (6.8%)
Pandemic Preparedness (Mandatory)	0	10,540	10,540 (100%)

*The FY 2023 enacted level for HRSA includes approximately \$1.5 billion in Congressionally Directed Spending projects which is not included in the budget request, appearing as a proposed cut to HRSA.

Source: *The FY 2024 HHS Budget in Brief* is available at <https://www.hhs.gov/sites/default/files/fy-2024-budget-in-brief.pdf>



The President’s FY 2024 budget request would provide approximately \$60.4 billion in net discretionary funding for DHS, \$658 million below the FY 2023 enacted level.

Quick Take: The FY 2024 budget request for DHS continues to prioritize signature Biden Administration initiatives such as cybersecurity, climate resiliency, and emergency response while directing specific funds to support operations at the southern border. Of note, the budget request proposes a new \$4.7 billion contingency fund to aid the Department in responding to recent migration surges, a controversial area on Capitol Hill that could threaten the bill’s passage as written.

Major Cuts/Eliminations: DHS would seek to provide \$887.2 million for S&T, representing a 1.5 percent decrease compared to FY 2023 enacted levels and continue a downward trend following one of the highest funding marks for the office in FY 2022. Of note, the budget request proposes funding the Office of University Programs (OUP) at \$51 million, consistent with the level requested by the Administration for FY 2023, but 4.7 percent below the FY 2023 enacted levels.

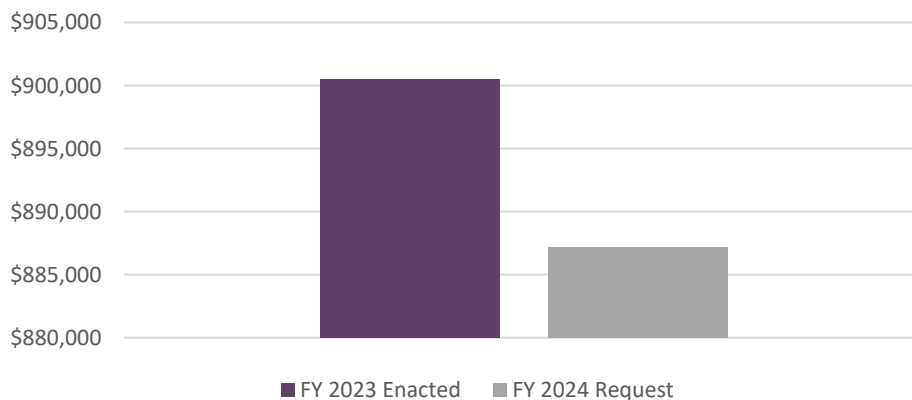
New Initiatives/Priorities: Building on efforts previously outlined in the Biden Administration’s FY 2023 budget request, DHS is seeking \$424.9 million for a new Cyber Analytics Data System (CADS), which would analyze critical threat data to better safeguard systems against harmful activity. A large portion of the S&T increase would support the modernization of research and development infrastructure, including \$35 million to continue construction on the Detection Sciences Testing and Applied Research (DSTAR) Center for explosive testing and evaluation and \$61.4 million to invest further in S&T Technology Centers, which will continue to focus R&D efforts on key DHS priority areas, such as AI/ML, cyber, intelligent sensors and digital identity technologies, among others. Despite proposed cuts to its Technology Transition account, DHS signals its intent to expand stakeholder outreach in furtherance of tech commercialization through Partnership Intermediary Agreements.

The Bottom Line

Unlike previous years, the Administration’s budget request provides significant regard for the independent science and research programs within the DHS Science and Technology Directorate (S&T) that often attract university and private sector partnerships to develop solutions for the Homeland Security enterprise. Notably, the request includes robust support for the university-based Centers of Excellence Program, bucking a trend of proposed cuts to the initiative going back to the Obama Administration. The request also signifies the Department’s continued prioritization of investments in near-term solutions over fundamental research, as several proposed initiatives are at high Technology Readiness Levels (TRLs). It remains to be seen if Congress will support the Administration’s plans to bolster DHS research initiatives among other competing priorities as they debate one of the most politically-divisive annual appropriations measures.



DHS S&T (In Millions)



Proposed Reductions and Terminations

Reductions are proposed for the two primary research and development programs: Research, Development and Innovation (RD&I) and OUP, with cuts of \$22.2 million and \$2.5 million, respectively. The RD&I account is traditionally divided into seven thrusts with proposed reductions to several thematic areas, including: Counter Terrorism; Cyber Security/Information Analysis; First Responder/Disaster Resilience; Innovation Research and Foundational Tools; and Physical Security and Critical Infrastructure Resilience. Of note, for FY 2024, the Administration is requesting an \$18.3 million increase for the Border Security Thrust, a reversal compared to proposed reductions in the FY 2023 request. The request includes plans to invest in technologies and solutions that aim to harden air, land and seaports of entry. Further, S&T's Chemical, Biological and Explosive Defense Thrust Area would also see an increase, with \$27.4 million requested for FY 2024, compared to the FY 2023 enacted level of \$21.5 million.

Ongoing Areas of Interest

Centers of Excellence: As noted above, the Administration again requests \$51 million OUP, which supports the Department's Centers of Excellence (COEs) and Minority-Serving Institutions (MSI) program. The budget request outlines plans for DHS to finalize two new COE competitions in FY 2023; divest of two existing COEs, Coastal Resilience and Critical Infrastructure Resilience Institute; and prepare to compete two new Centers in FY 2024. Similar to prior years, the topics for the new COEs are currently unknown and will be decided by DHS based on established needs with insight from the Department's components.

Community and Infrastructure Resilience: The request would continue a trend from past requests of reduced funding for several community and infrastructure resilience R&D activities, including zeroing out the Climate Adaptation and Resilience Program and instead signaling its support for this program at the new ARPA-C within the Department of Energy.



Technology Centers: Technology Centers are teams within DHS S&T that focus on immediate technological needs and processes in priority areas and assist stakeholders within the homeland security enterprise with implementation. While funding for the Technology Centers is proposed at the FY 2023 enacted level., the program would see a nearly \$22 million increase in early-stage research and development investments. The budget request outlines numerous priority areas for the Technology Centers in FY 2024, including AI/ML, cybersecurity risks, quantum information science, climate change and resilience, and advanced wireless networks that support the homeland security mission needs.

Source: DHS’s FY 2024 Budget in Brief is available [here](#), while the full budget justification can be found at <https://www.dhs.gov/publication/congressional-budget-justification-fiscal-year-fy-2024>.

Department of Homeland Security (in thousands of \$)

	FY 2023 Enacted	FY 2024 Request	FY 2024 Request vs. FY 2023
DHS, Total	61,095,887⁺	60,436,973[‡]	-658,914 (-1.1%)
Science and Technology Directorate	900,541	887,169	-13,372 (-1.5%)
University Programs	53,537	51,037	-2,500 (-4.7%)

⁺ FY 2022 other non-defense discretionary appropriations

[‡] Approximate net discretionary funding provided in the “FY 2023 Congressional Justification”



The FY 2024 budget request would provide \$39.7 billion in discretionary funding for the Department of Justice (DOJ), a roughly \$2.3 billion increase above the FY 2023 enacted level. Of these funds, \$141 million would be provided for the base Research, Evaluation, and Statistics account, a significant \$64.2 million increase above the FY 2023 level.

Quick Take: Significant resources would be provided for Biden Administration priorities that seek to broadly promote equity in the criminal justice system, as well as address public safety threats like violent crime, especially with firearms, among other areas.

Major Cuts/Eliminations: The request places less emphasis on issues like school safety and domestic radicalization relative to previous requests. Focus is shifted to public safety overall, combatting gun violence, advancing research innovations and evaluations, and bettering relations between law enforcement and communities.

New Initiatives/Priorities: The budget request would provide significant mandatory and discretionary funding for state and local resources to address key priorities, including over \$300 million for new interventions to reduce crime and promote equity and \$884 million for a new program to invest in data-informed strategies to address gun crime.

The Bottom Line

The budget calls for a notable investment in funding for the Department's Research, Evaluation, and Statistics account. The overall request could run into partisan divides on issues such as policing and gun control that could threaten compromise on a final bill. However, the budget also proposes investment in bipartisan priorities such as combatting the opioid epidemic, mitigating violent crime, and enhancing cybersecurity.

New and Signature Initiatives

The budget request would provide an 83 percent increase to the base Research, Evaluation, and Statistics account (RES), which often supports university partnerships to develop best practices, technologies, and processes for the administration of justice. The budget proposes that \$141 million of this funding would come from directly appropriated funds. In addition to this amount, \$8.2 million would be transferred from the Federal Bureau of Prisons for research activities related to the *First Step Act*, a 2018 criminal justice bill aimed at **reforming federal prisons and reducing recidivism**. \$63 million would be provided for the Office of Justice Programs' (OJP) National Institute of Justice (NIJ), DOJ's primary research account for universities, which would be a \$28 million increase over the FY 2023 enacted level. This increased funding would support NIJ's development of **new tools to meet crime and justice challenges** for state, local, and tribal governments.

Some specific programs supported by NIJ would include \$10 million for research on developing and implementing more **effective policing practices**; \$5 million for research on methods that accurately measure the impact of policing programs on **community trust**; \$5 million for building **social and behavioral science as well as STEM capacity at minority serving institutions**; and \$5 million implementation of the *Evidence Act*, which supports **evidence-based practices at federal agencies**. The request also calls for an increase in the annual set-aside of OJP funding for RES activities from two to three percent, which would provide \$94.5 million in supplemental funding for RES activities. In addition, NIJ would leverage funding from the Byrne Justice Assistance Grants program to support **graduate research fellowships in STEM** with the goal of boosting the number of research-oriented forensic scientists. The increased funding that would be provided for NIJ aligns with the Biden Administration's goal to "advance science and innovation to guide policy and practice," one of the priorities identified in the request for OJP. The Administration's other key priorities include "advancing public safety, reducing violent crime, and increasing community trust; accelerating justice system reforms that promote community safety and well-being, racial equity, and justice for all; transforming the juvenile justice system into one that is effective and equitable; and ensuring rights, access, and equity for all victims of crime."



The Biden Administration proposes a number of new initiatives and programs relevant to the research community to address these priorities, including \$5 million to establish and administer a new **Capacity Building Center (CBC)** to equip community-based organizations in underserved communities with professional and leadership development. In addition to CBC, the budget proposes \$5 million for a novel **psychoactive substances discovery program**, which would create resources for forensic science, public health, law enforcement, and stakeholder communities to fund datamining and testing to mitigate the rise in new psychoactive drugs like synthetic opioids. The budget would also provide a \$15 million carve out of the Byrne Justice Assistance Grants program to create a dedicated program for **forensic science research and development** that will promote efficiency, effectiveness, and fairness in the criminal justice system. This program would support intramural and extramural research, and collaborations between academia, government, and private organizations. In addition, \$10 million would be provided for new state and local governments to support and test “**innovative projects to address public safety needs.**”

Ongoing Areas of Interest

Increasing trust and engagement between communities and law enforcement continues to be a top priority for the Biden Administration. To advance this goal, the budget would allocate \$5 million for a **National Law Enforcement Knowledge Lab** to serve as a national hub where law enforcement professionals and agencies can access nationwide standards and best practices for crime reduction. This hub will promote fairness and effectiveness by creating a network of subject experts, law enforcement practitioners, researchers, policy makers, and community stakeholders.

Sources:

DOJ’s FY 2024 Budget Summary and Background Information is available at https://www.justice.gov/d9/2023-03/2-fy_24_budget_summary_-_03.9.23_1245pm.pdf.

The OJP budget summary is available at https://www.justice.gov/d9/2023-03/ojp_fy_24_budsum_ii_omb_cleared_3.07.23.pdf.

DOJ’S FY 2024 Budget Request Fact Sheet is available at: https://www.justice.gov/d9/2023-03/7-protecting_civil_rights_fact_sheet_-_omb_cleared_-_03.08.23.pdf.

Department of Justice

(in thousands of \$)

	FY 2023 Enacted	FY 2024 Request	FY 2024 Request vs. FY 2023
DOJ, total*	37,484,908	39,736,384	2,251,476 (6.0%)
Research, Evaluation, and Statistics	77,000	141,000	64,200 (83.1%)
National Institute of Justice	35,000	63,000	28,000 (80.0%)

* This amount includes discretionary funding and mandatory fee collections.

Department of Labor



Discretionary programs within the Department of Labor (DOL) would be funded at \$15.1 billion, up \$1.7 billion, an 11 % increase compared to the FY 2023 enacted level.

Quick Take: The FY 2024 budget request would increase support for training programs for dislocated workers, low-income adults, and disadvantaged youth. The budget requests calls for \$335 million for Registered Apprenticeships.

Major Cuts/Eliminations: No major cuts or eliminations are proposed.

New Initiatives/Priorities: The request continues calls for \$15 million to establish the Civilian Climate Corps and \$20 million for the POWER+ Initiative, which aims to support communities transitioning from fossil fuel production to new industries. The request continues support for the Strengthening Community Colleges, with a proposed \$100 million in funding.

The Bottom Line

The Biden Administration proposes DOL investments in evidence-based training opportunities, career pathways, and sector partnership models.

New and Signature Initiatives

The budget request proposes \$200 million to create the **Sectoral Employment through Career Training for Occupational Readiness (SECTOR)** program. Sector partnerships, which are often described as a partnership of employers within a critical industry that brings together education, economic development, workforce systems, and community organizations to meet the workforce needs within a regional labor market, continue to be a priority for DOL. DOL notes the workforce needs in infrastructure, clean energy, and semiconductor manufacturing as potential industries to target. The budget also includes a \$55 million increase for the **Reentry Employment Opportunities** program, for a total of \$170 million to support a workforce development partnership with the Federal Bureau of Prisons (BOP). Community colleges also continue to remain a priority for the Administration, with a proposed \$100 million for the **Strengthening Community Colleges Training Grants** program. The “Job Training for Employment in High-Growth Industries,” which receives funding through H-1B visa fees, will support competitive grants to fund workforce development efforts in infrastructure sectors.

As noted above, \$335 million, a \$50 million increase over current year funding would be provided under the request to expand access to **Registered Apprenticeships**. The DOL budget brief notes “The increase will also enhance the Department's support for pre-apprenticeships, youth apprenticeships, and degreed apprenticeships...” Additionally, the request notes that the increase for apprenticeships will go to support workforce development efforts created by the Bipartisan Infrastructure Law (BIL), CHIPS, and the Inflation Reduction Act (IRA) and to expanding the network of Apprenticeship Hubs. The request would also fully fund **Workforce Innovation and Opportunity Act (WIOA)** programs at their authorized levels and continues funding for the **Workforce Opportunities for Rural Communities (WORC)** grant program.

Department of Labor



The request includes \$11 million for the **Workforce Data Quality Initiative (WDQI)**, an increase of \$5 million over FY 2023.

Source: DOL's FY 2024 Budget Summary and Background Information is available at <https://www.dol.gov/sites/dolgov/files/general/budget/2024/FY2024BIB.pdf> and supporting budget explanatory information can be found at <https://www.dol.gov/general/budget>.

U.S Department of Labor (in thousands of \$)

	FY 2023 Enacted	FY 2024 Request	FY 2024 Request vs. FY 2023
Training and Employment Services			
Adult Employment and Training Activities	885,649	899,987	14,338 (1.6%)
Youth Activities	948,130	963,837	15,707 (1.6%)
Dislocated Workers Employment and Training Activities	1,421,412	1,519,664	98,252 (6.9%)
<i>National Dislocated Workers Grants</i>	325,009	364,386	39,377 (12.1%)
Apprenticeship Program	285,000	335,000	50,000 (17.5%)
Workforce Data Quality Initiative	6,000	11,000	5,000 (83.3%)
Veterans' Clean Energy Training Program	--	--	--
Sectoral Employment Through Career Training for Occupational Readiness (SECTOR)	--	200,000	200,000 (100%)
Civilian Climate Corps	--	15,000	15,000 (100%)

Humanities, Arts, and Cultural Agencies



The President’s FY 2024 budget proposes modest increases for the grant-making humanities, arts, and cultural agencies, including the National Endowments for the Humanities and Arts, among others.

Quick Take: President Biden’s FY 2024 budget proposal would provide modest increases for the National Endowment for the Humanities (NEH) and the National Endowment for the Arts (NEA), with a reduction in funding for the National Archives and Records Administration (NARA). The budget request proposes \$211 million each for NEH and NEA, a \$4 million increase over current levels. The President’s budget request proposes \$10 million for the National Archives and Records Administration’s grant-making entity, National Historical Publications and Records Commission (NHPRC). Excluding \$22.6 million of congressional directed spending projects in FY 2023, this would represent a potential \$2 million cut compared to the FY 2023 enacted level.

Major Cuts/Eliminations: Despite the \$4 million proposed increase to NEH’s budget, the budget request would level fund or provide minor cuts to most of the agency’s program offices to support an additional \$6 million in spending on administrative hires related to diversity and inclusion, cybersecurity, and IT modernization. The \$24.6 million proposed cut to NHPRC reflects reduction of \$22.6 million in non-recurring Congressionally directed spending, otherwise known as earmarks, and \$2 million cut in the elimination of one-time funding for the preservation of records from retiring members of Congress.

New Initiatives/Priorities: The NEH budget proposes the creation of new initiatives such as the **National Digital Broadcasting Program** to digitize significant broadcast programming. The budget request continues to emphasize climate change as a priority for the agency, with NEH planning to award individual **fellowships on climate change** to encourage scholarship in the environmental humanities. NEH also plans to host new **convenings on the future of humanities graduate education and impacts of climate change on the humanities** in FY 2024. In conjunction with the Biden Administration’s **United We Stand** summit in September 2022, NEH would dedicate \$2.8 million for state humanities councils under its initiative of the same name to develop programming addressing hate-based violence and domestic extremism.

The NEA proposes allocating \$2 million toward **United We Stand** efforts for the development of a new initiative, in conjunction with NEH. NEA additionally requests \$1 million to “permanently establish the Office of the Chief Diversity Officer.”

The Bottom Line

The budget request proposes relatively stable budgets for the NEH, NEA, and NARA in FY 2024. While these agencies are often targeted for cuts in challenging fiscal environments, Congress has provided them with bipartisan funding increases in recent years.

Humanities, Arts, and Cultural Agencies



Proposed Funding for Existing Programs of Note: NEH plans to continue or expand several recently launched programs, including Dangers and Opportunities of Technology; Spotlight on Humanities in Higher Education; Cultural and Community Resilience Program; Climate Smart Humanities Organizations; and History and Culture Access Consortium for HBCUs. NEH similarly plans to continue support for the **A More Perfect Union** initiative projects in preparation for the 250th anniversary of the Declaration of Independence in 2026, and the **American Tapestry: Weaving Together Past, Present, and Future** initiative. The American Tapestry initiative “invests in projects that (1) support civics education, including Americans’ knowledge of the country’s democratic traditions and constitutional principles; (2) foster civic engagement and media and information literacy; and (3) examine threats to America’s democracy.”

NEA plans to continue its major direct grants programs. The budget request would provide a slight cut to the Research Grants in the Arts Program of \$125,000, but an increase of \$225,000 to the Research Labs program. The agency proposes a slight increase in funding for the Creative Forces Initiative, for a total amount of \$23.35 million, to expand the program through community-based projects to target new populations and areas that have been exposed to military/veteran-related trauma.

Within NHPRC, the President’s budget requests level funding of \$3 million to continue the Historically Black Colleges and Universities (HBCU) Grants Program, which seeks to help HBCUs preserve and make historical documents related to their university more accessible.

As of this writing, details on the President’s FY 2023 budget request for the Institute for Museum and Library Sciences (IMLS) have not been published.

Sources: NEH’s FY 2024 Budget Request is available at <https://www.neh.gov/sites/default/files/inline-files/NEH%20FY%202024%20CJ%20%281%29.pdf>.

NEA’s FY 2024 Budget Request is available at <https://www.arts.gov/sites/default/files/NEA-FY24-Congressional-Budget-Request.pdf>.

NARA’s FY 2024 Budget Request is available at <https://www.archives.gov/files/about/plans-reports/performance-budget/2024-nara-congressional-justification.pdf>.

Humanities, Arts, and Cultural Agencies



Humanities, Arts, and Cultural Agencies (in thousands of \$)

	FY 2023 Enacted	FY 2024 Request	FY 2024 Request vs. FY 2023
NEH, total	207,000	211,000	4,000 (1.9%)
Research Programs	17,500	17,500	--
Education Programs	15,400	14,800	-600 (3.9%)
Challenge Programs	15,750	14,800	-950 (6.0%)
Digital Humanities	6,250	6,050	-200 (3.2%)
NEA, total	207,000	211,000	4,000 (1.9%)
Grants	97,470	98,820	1,350 (1.4%)
IMLS, total	284,800	TBA	TBA
NARA, total*	454,474	467,613	13,139 (2.9%)
NHPRC, total*	12,000	10,000	-2,000 (16.7%)

* FY 2023 enacted levels for NARA and NHPRC exclude Congressionally Directed Spending funding.

National Aeronautics and Space Administration



NASA would be funded at \$27.18 billion, an increase of \$1.8 billion (7.1 percent) above the FY 2023 enacted level.

Quick Take: The Biden Administration’s FY 2024 budget maintains NASA’s overall trajectory but also reflects difficult choices facing the agency given macro-level budgetary headwinds and its ambitious scientific and exploration agenda.

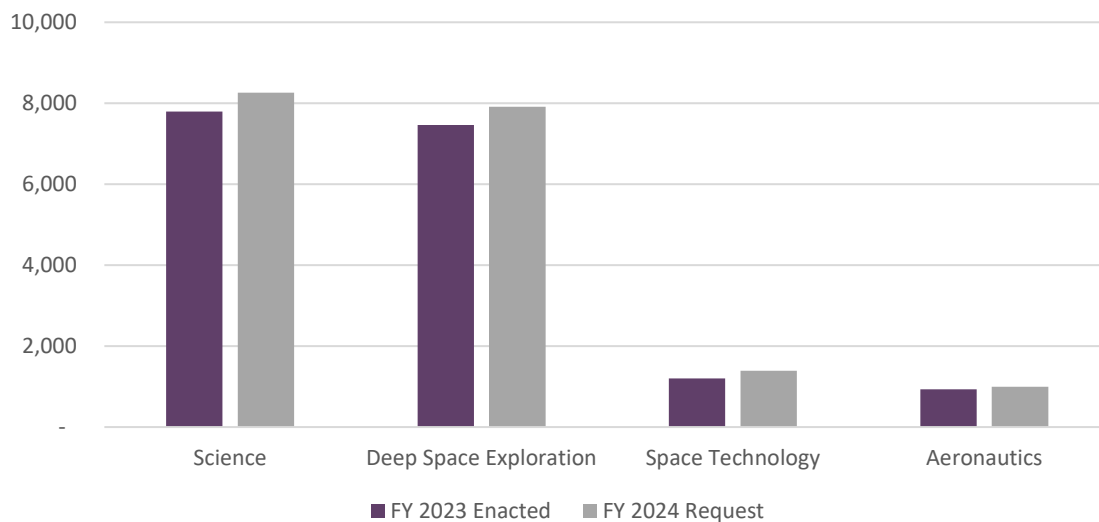
Major Cuts/Eliminations: The budget does not propose major cuts or eliminations, although disruptions attributed to cost growth and unanticipated schedule slips of large missions under development are prevalent across NASA science divisions.

New Initiatives/Priorities: The FY 2024 proposal is generally consistent with past Biden Administration requests for NASA emphasizing Earth science missions and climate research, applied technology development, and maturing core human exploration capabilities.

The Bottom Line

The FY 2024 request continues most of NASA’s ongoing areas of focus across its portfolio of science, exploration, and technology development activities. Compounded by both uncertain federal fiscal outlook and lower than requested funding for several of its key directorates in FY 2022 and 2023, the Administration’s proposal lacks substantive major programmatic announcements hoped for by many stakeholders.

NASA Major Accounts
(In Millions)



National Aeronautics and Space Administration



New and Signature Initiatives

The budget requests \$2.47 billion for NASA's **Earth Science Division** (ESD), an increase of \$277.8 million or 12 percent above FY 2023. This is the largest dollar and percentage increase of any division within SMD and highlights the Administration's ongoing efforts to increase funding for ESD despite a similar emphasis by Congress.

The proposal includes NASA's decision to formally initiate four of five "Designated" observables missions comprising the "Earth System Observatory" program. These flagship-class missions were top recommendations of the 2017 *Earth Science and Applications from Space Decadal Survey* (ESAS 2017). Timing of an Announcement of Opportunity (AO) for an **Earth System Explorer** mission – delayed by over a year relative to NASA's initial plans – is confirmed for late spring of 2023. The request notes a two-year cadence for future AOs, which has not been included in past budgets or NASA statements. The budget also confirms ESD's intention to release an AO for the next Earth Venture Suborbital and Earth Venture Continuity competitions in FY 2024 and FY 2023, respectively.

The request includes \$949.3 million for NASA's **Mars Sample Return** (MSR) within the Planetary Science Division, an increase of \$127 million and 15 percent above FY 2023 enacted. No science mission has reached this level of funding in a given year, and the budget states that MSR's funding requirements in the future is likely to exceed the request's notional outyear figures. The cost profile and development timeline of MSR has, and will continue to have, ramifications on other programs and missions in SMD. For instance, the budget states that the pause in development of the Geospace Dynamics Constellation (GDC) is at least partly attributable to MSR's cost increases.

The budget would provide NASA's **Space Technology Mission Directorate** (STMD) \$1.39 billion, a \$191.6 million or 16 percent increase over FY 2023. This includes an increased emphasis in space nuclear technologies (Fission Surface Power, Nuclear Thermal Propulsion and Nuclear Electric Propulsion) and will support the first ever test of space fission power system. STMD plans to focus technology developments on orbital debris mitigation technologies, Commercial Lunar Payload Services (CLPS) payloads and experiments, surface excavation and construction, and Moon-to-Mars Planetary Autonomous Construction Technology.

Ongoing Areas of Interest

NASA SMD would be funded at \$7.98 billion, an increase of \$373.9 million or 4.9 percent. Existing missions across SMD would be funded at levels necessary to continue development, with only a few exceptions.

The request would provide the **Astrophysics Division** with \$1.56 billion in FY 2024, a \$47.4 million or 3.1 percent increase above FY 2023. The budget does not include explicit funding to establish a "Great Observatories Mission and Technology Maturation Program" (GOMAP) despite NASA's previous indications. GOMAP was recommended by the *Astronomy and Astrophysics 2020 Decadal Survey's* (Astro2020) as a precursor activity before formulation of its top recommended "Great Observatories" flagship mission. The forthcoming AO for a new **Astrophysics Probe**-class mission, another top Astro2020 recommendation, is confirmed for July of this year. This welcome news for the astrophysics community is offset by the budget's announcement that NASA will delay the next **Explorer** AO from March 2024 originally to March 2025 due to budget constraints.

National Aeronautics and Space Administration



The **Planetary Science Division** (PSD) would receive \$3.16 billion in FY 2023, an increase of \$39.8 million or 1.3 percent above FY 2022. PSD will face significant budgetary and schedule challenges for the foreseeable future. Large missions under development (i.e., Dragonfly and MSR) are experiencing cost growth and/or schedule delays that have and will continue to impact PSD's larger portfolio and future competitive opportunities. The next Discovery AO, originally planned for release in FY 2023 and then delayed indefinitely, is notionally planned for 2025. In the interim, PSD will release a draft **SIMPLEX** AO in FY 2024 for a single selection (versus several awards, historically) albeit at an increased cost cap of \$85 million. One bright spot is the accelerated timeline for a New Frontiers 5 AO release to November 2023. The request is also the first to occur after release the **2023 Planetary Science and Astrobiology Decadal Survey**. The request does not provide funding to initiate the decadal's highest recommendation of a Uranus Orbiter and Probe mission.

The **Heliophysics Division** (HPD) would be funded at \$750.9 million, \$54.1 million or 6.7 percent below the FY 2023 enacted level. A majority of this decrease would be attributed to pausing development of the Geospace Dynamics Constellation (GDC) mission. The budget also proposes a 70 percent decrease in funding for the Heliophysics Technology account that funds transformative technology development, a portion of which is due to the cancellation of the Solar Cruiser technology mission. In contrast, the budget would support an increase to the Heliophysics Explorers program and projects a significant ramp up in funding over the next two years to support the current cadence of new missions under development and the next award announcement expected in FY 2023. The request would also increase funding for the research and analysis program, including a new Space Weather Research and Analysis element.

The Administration would provide \$995.8 million for the **Aeronautics Research Mission Directorate**, a \$61 million or 6.5 percent increase over the FY 2023 enacted level. This includes a large increase for ultra-efficient aviation through the Sustainable Flight National Partnership as its Sustainable Flight Demonstrator moves some the concept to design and construction phase. The request would also support continued development of Advanced Air Mobility capabilities and work with the Federal Aviation Administration to ensure their safe and effective integration into the National Air Space and local communities. NASA plans to continue the annual solicitation for the University Leadership Initiative and would increase funding for the program for development of beyond next-generation zero-emission aircraft concepts and technologies.

The budget would provide \$157.8 million, 10 percent above FY 2023 level, for the **Office of STEM Engagement** (OSTEM), to continue lead NASA-wide educational efforts. Additional funding is requested for the Next Gen STEM program to enhance critical investments in K-12, including expanding support for strategic partnerships that strengthen the reach and effectiveness of NASA's K-12 education efforts. This would include a new open solicitation for external organizations to support the development and execution of high impact national activities to engage diverse learners in NASA STEM content and careers. Funding for NASA Space Grant and EPSCoR would remain flat funded.

Source: NASA's FY 2024 Budget Summary and Background Information is available at <https://www.nasa.gov/news/budget/index.html>.

National Aeronautics and Space Administration



National Aeronautics and Space Administration

(In thousands of \$)

	FY 2023 Enacted	FY 2024 Request	FFY 2024 Request vs. FY 2023
NASA, total	25,383,701	27,185,000	1,801,299 (7.1%)
Science	7,795,000	8,260,800	465,800 (6.0%)
Earth Science	2,195,000	2,427,800	277,800 (12.7%)
Planetary Science	3,200,000	3,383,200	183,200 (5.7%)
Astrophysics	1,510,000	1,557,400	47,400 (3.1%)
Heliophysics	805,900	750,900	-54,100 (6.7%)
Biological and Physical Sciences	85,000	96,500	11,500 (13.5%)
Aeronautics	935,000	995,800	60,800 (6.5%)
Space Technology	1,200,000	1,391,600	191,600 (16.0%)
Deep Space Exploration Systems	7,468,850	7,971,100	502,250 (6.7%)
Space Operations	4,250,000	4,534,600	284,600 (6.7%)
STEM Engagement	143,500	157,800	14,300 (10.0%)
Space Grant	58,000	58,000	-
EPSCoR	26,000	26,000	-
Minority University Research and Education Program (MUREP)	43,500	48,100	2,600 (5.7%)
Safety, Security, & Mission Services	3,129,500	3,369,400	239,900 (7.7%)
Construction and Environmental Compliance and Restoration	414,300	453,700	39,400 (9.5%)
Office of Inspector General	45,300	50,200	2,600 (5.5%)

National Science Foundation



NSF would be funded at \$11.31 billion in FY 2024, an 18.6 percent or \$1.78 billion increase above the FY 2023 base level and 14.6 percent above NSF’s total FY 2023 funding including all supplemental funds.

Quick Take: The Biden Administration again proposes major increases across NSF for FY 2024, including in Administration priority areas as well as core NSF research, education, and infrastructure programs. This level of funding is less than authorized by *CHIPS and Science*, and many authorized programs are not included in the budget request.

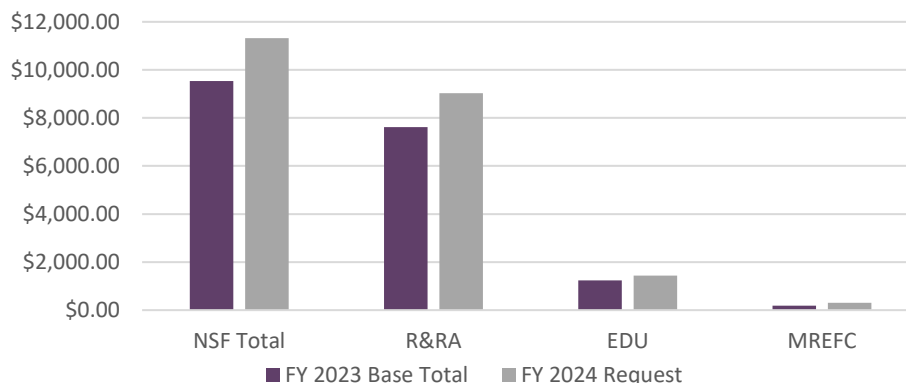
New Initiatives/Priorities: Priorities are largely continued from previous years. The request would provide \$1.2 billion in funding to continue growth of the new Directorate for Technology, Innovation, and Partnerships (TIP) and \$300 million to support the Regional Innovations Engine program. Both the existing directorates of NSF and TIP would fund activities in priority areas such as climate and energy, emerging technologies, broadening participation, and capacity building. Funding for research infrastructure would also be increased to support upgrades and completion for existing infrastructure projects and pilot funding to launch the new AI Research Resource.

Major Cuts/Eliminations: No major cuts or eliminations are outlined in the request. However, many of the Big Ideas for Future Investment would transition to core programs as they were planned to naturally sunset in FY 2023. Core programs in many directorates would grow at smaller rates than cross-cutting priority areas. Disciplinary divisions range from 3.2 percent to 16.1 percent proposed growth.

The Bottom Line

The budget request’s emphasis on TIP, climate, clean energy, and equity aligns with Biden Administration priorities and congressional interest in boosting NSF’s role in competitiveness. However, it remains to be seen if appropriators will have the resources to deliver such major increases to NSF’s budget, especially in a divided Congress. If not, tougher choices may again need to be made on how much to grow TIP and other priority areas versus protecting core programs.

NSF Major Accounts (In Millions)





New and Signature Initiatives

Build a Resilient Planet

The new “all of NSF” Build a Resilient Planet initiative aims to “create broad new understanding and innovations that will increase energy resilience, enhance sustainability, mitigate climate change, and lead to other societal benefits.” This theme will begin in FY 2023 with investments in the National Discovery Cloud for Climate, new coordination hubs led by the Engineering Directorate to catalyze partnerships to address clean energy challenges, Design for Environmental Sustainability in Computing, Future Manufacturing, Critical Aspects of Sustainability, and Global Centers. As part of this theme, NSF proposes to support Clean Energy Technology at \$550.5 million in FY 2024, an increase of 16.7 percent above the FY 2023 level. The interagency US Global Change Research Program would grow by 24 percent from the FY 2023 level to \$1.047 billion in FY 2024.

For FY 2024 NSF, in addition to expanding ongoing research and programs, plans to:

- Build a National Resilience Network with a focus on hazards resilience and climate innovation, including disaster resilient communities, resilience technology, a new Climate Innovation Challenge, and research on human health climate change impacts.
- Establish centers and hubs for research, testing, coordination, and translation to address complex challenges in adaptation, resilience, bioeconomy, clean energy, wildfires, drought, and other topics.
- New Climate Equity Fellows to train students and researchers on how to work with underserved communities to address climate impacts as part of their research.
- Expand interdisciplinary research in areas such as sustainable regional systems, climate change, and sustainable chemistry to address critical aspects of sustainability (CAS).
- Continue support for research infrastructure including implementation of the National Discovery Cloud for Climate and new testbeds for energy efficiency and electric grid optimization.
- New approaches to design in extreme environments to address challenges related to the changing climate.

Directorate for Technology, Innovation, and Partnerships (TIP)

The FY 2024 budget request would fund TIP at \$1.19 billion, an increase of 77 percent above the FY 2023 level. TIP aims to advance science and engineering research and innovation, accelerate the translation of basic research, solve national and societal problems, and support education pathways.

The FY 2024 request would provide \$300 million to fund up to 20 **Regional Innovation Engines** under competition now that will support “use-inspired research, entrepreneurship, and workforce development to nurture and accelerate regional industries.” This is an increase of 33 percent over the FY 2023 funding level, which was provided entirely through the *CHIPS and Science* supplemental.

New for FY 2024, NSF proposes \$106 million for **testbeds** to advance development, operation, integration, deployment, and demonstration of innovative critical technologies. The request would provide major increases to other TIP programs, many of which were launched over the last year. This includes \$50 Million for the Experiential Learning for Emerging and Novel Technologies (ExLENT) program (150 percent over FY 2023 total funding), \$45 million for the recently launched Accelerating Research Translation (ART) program, and \$35 million for Pathways to enable Open-Source Ecosystems (26 percent over FY 2023 total funding). The Convergence Accelerator would see 43 percent growth to \$100 million that would support regional anchors developing solutions to location-specific challenges. Other programs would see more modest growth including Entrepreneurial Fellows, Partnerships for Innovation, and I-Corps, which would all be flat with their total FY 2023 funding.



In addition to the programs mentioned above, TIP would provide \$25 million for the assessments of emerging technologies and industries focused on U.S. competitiveness and \$10 million to truly launch its Strategic Partnerships Office that aims to support partnerships across NSF with other agencies, industry, foundations, or others.

Create Opportunities Everywhere (COE) Theme

The new Create Opportunities Everywhere (COE) theme would enhance NSF efforts to engage the talent of all Americans across the nation. COE is an “all of NSF” strategy that aims to expand “access and inclusion in STEM along individual, institutional, and geographic lines.” This theme aims to leverage existing NSF efforts in broadening participation and capacity building to address research equity; build capacity, foster collaborations and partnerships, and support the next generation of researchers. NSF plans for FY 2024 include increased support for existing programs focused on broadening participation of individuals underrepresented in STEM as well as the creation of new programs and funding mechanisms.

- A new **Analytics for Equity** initiative would support the collection and analysis of data on STEM participant demographics in federally funded awards.
- **Growing Research Access for Nationally Transformative Equity and Diversity (GRANTED):** NSF would provide \$50 million, an 11 percent increase from FY 2023, for the second year of an initiative that aims to improve “research support and service capacity at emerging and underserved research institutions.”
- **Significant growth to most existing broadening participation programs:** NSF would increase funding for programs focused on broadening participation across the agency to \$738.3 million, an increase of 25 percent above total FY 2023 levels including *CHIPS and Science* supplemental funds. Existing programs include the NSF INCLUDES program, renamed the Eddie Bernice Johnson INCLUDES Initiative, (up 45 percent), Advancement of Women in Academic Science and Engineering Careers (ADVANCE, up 6 percent), Centers for Research Excellence in Science and Technology (up 28 percent), Alliances for Graduate Education in the Professoriate (AGEP, up 24 percent), Louis Stokes Alliances for Minority Participation (LSAMP, up 27 percent), Tribal Colleges and Universities Program (TCUP, down 11 percent), Historically Black Colleges and Universities Undergraduate Program (HBCU-UP, up 5 percent), and the Improving Undergraduate STEM Education: Hispanic Serving Institutions program (IUSE:HSI, up 9 percent).
- **NSF EPSCoR** would grow 10 percent over FY 2023 funding levels to \$281 million. Increased funding would support interjurisdictional research and development capacity building efforts across different institution types.

Advancing Emerging Industries

NSF would continue prioritization of “Emerging Industries” across the agency, including through scaling existing activities and launching new programs. Support for these technologies aim to “to strengthen and scale investments that advance breakthrough technologies, including innovation and translation.” NSF plans for Emerging Industries include:

- **Microelectronics and Semiconductors:** NSF would provide \$209.7 million for semiconductors and microelectronics in FY 2024, an increase of 28 percent above FY 2023 total funding. NSF investments would support expansion of existing programs such as the Future of Semiconductors program as well as new opportunities focused on research and research infrastructure, methods for device integration, and novel architectures. NSF is also developing a spend plan for the \$200 million for FY 2023 through FY 2027 that was provided to the agency through the *CHIPS and Science Act of 2022*.
- **Advanced Manufacturing:** Funding for Advanced Manufacturing would increase by 28.1 percent above FY 2023 to \$453.86 million in FY 2024. Increases will focus on expansion of existing programs such as Advanced Manufacturing Research, Future Manufacturing Research, and a variety of workforce development and translation programs.

AGEP funding reflects the combined funding for AGEP and AGEP Graduate Research Supplements compared to the funding for both programs in FY 2023. AGEP itself would grow 63 percent over the FY 2023 base total level and 82 percent over FY 2022 spending, but AGEP GRS would be cut 4 percent below the FY 2022 spending level.

National Science Foundation



- **Quantum Information Science (QIS):** QIS would receive \$332.7 million in FY 2024, an increase of 20.6 percent over the FY 2023 total level. NSF plans to launch the design phase of the National Quantum Virtual Laboratory, first piloted in FY 2023. All areas of quantum would see growth as NSF plans continued support for existing initiatives and growth to the ExpandQISE capacity building program.
- **Biotechnology:** Biotechnology would receive \$470.1 million in FY 2024, an increase of 17.1 percent over total FY 2023 levels. Investments include expansion of existing research, translation, and workforce development programs and a new Biofoundry program to support a network of center scale facilities focused on new tools for biotechnology at multiple scales. The program will include research and enabling infrastructure that builds capacity in new regions and institutions not currently well supported by NSF.
- **Artificial Intelligence (AI):** AI is proposed for \$796.5 million in FY 2024, an increase of 15.8 percent above the total FY 2023 level for AI research and education efforts across the agency. Growth will support current AI institutes, 6 new awards currently under the FY 2023 competition, as well as up to two additional awards planned for FY 2024. NSF will additionally support recently launched and long-standing AI programs in research and education. The budget request proposes \$30 million to launch the National AI Research Resource (NAIRR) that the NAIRR Task Force recently called for.
- **Advanced Wireless Research:** NSF proposes \$179.2 million for Advanced Wireless activities in FY 2024, 11.1 percent over the total FY 2023 level. Growth would support existing research, education, and infrastructure programs, including RINGS, PAWR, and SII among others.

Strengthening Research Infrastructure (RI)

NSF will continue to support RI through a range of funding mechanisms to ensure ongoing operations and maintenance (O&M) and to ensure research infrastructure remains at the cutting edge. Overall, research infrastructure investments would increase by 15.5 percent over the FY 2023 base level. Specific investments include:

- Mixed growth to **Mid-scale Research Infrastructure** Programs: NSF plans to provide a significant increase to the larger Mid-Scale RI-2 program, by 38 percent to \$105 million, while the smaller Mid-Scale RI-1 program would see a 9 percent decrease to \$50 million. Individual directorate research infrastructure programs would grow 124 percent over FY 2023 levels to \$84 million.
- The Directorate for Mathematical and Physical Sciences (MPS) will collaborate with other directorates and offices to establish **Revitalization of American Academic Research Infrastructure (RAARI)**, a new program to provide instrumentation and infrastructure support for emerging research institutions (ERIs).
- The **Major Research Equipment and Facilities Construction (MREFC)** account would continue funding for five projects—the Antarctic Infrastructure Recapitalization program, the two detector upgrades to operate at the High Luminosity-Large Hadron Collider Upgrade (HL-LHC), the Vera C. Rubin Observatory, and the Regional Class Research Vessels (RCRV) and no new projects are proposed.
- While no major funding is included for the projects recommended by the 2022 astronomy and astrophysics decadal survey, the **Division of Astronomical Sciences** continues small scale design funding for ngVLA and consideration of potential future participation in the Extremely Large Telescope program.
- For smaller infrastructure, the **Major Research Instrumentation (MRI)** program would be supported at \$93 million, an increase of 11 percent above the FY 2023 level.
- The **National Center for Science and Engineering Statistics (NCSES)** will continue investing in the America's Data Hub Consortium to expand access to federal agency data, including projects to inform the National Security Data Service (NSDS) authorized in the *CHIPS and Science Act of 2022*.



Ongoing Areas of Interest

Cybersecurity

The Secure and Trustworthy Cyberspace (SaTC) initiative would be supported at \$157.5 million in FY 2024, flat with the FY 2023 level. NSF is carrying out an extensive review of the SaTC program with the aim of creating a new solicitation in FY 2024 with a significantly broadened scope. NSF would continue ongoing research, infrastructure, and education investments, including flat funding the CyberCorps Scholarships for Service (SFS) program at \$74 million.

Science, Technology, Engineering, and Mathematics (STEM) Education Research

Overall NSF would prioritize STEM education research and development programs, especially those focused on core research, K-12 education, and advancements in education technology. EDU Core Research programs across divisions would see 20 percent growth over FY 2023 base total levels to a combined \$100 million. Advancing Informal STEM Learning (AISL) would grow 14 percent over FY 2023 to \$80 million. Exceptions to the proposed growth for K-12 and informal STEM research programs is the Discovery Research preK-12 (DRK-12) and Computer Science for All (CSforAll), which would be essentially flat funded at \$100 million and \$24.5 million, respectively.

Undergraduate Education

Undergraduate education investments would see more mixed funding as the NSF-wide Improving Undergraduate STEM Education (IUSE) initiative would be increased by 5 percent to \$108 million. Advanced Technological Education (ATE) would be decreased 1 percent to \$75 million. The Robert Noyce Teacher Scholarship Program would be increased 9 percent to \$77 million. The Research Experiences for Undergraduates (REU) sites and supplements would be increased 5 percent to \$85 million.

Programs funded by H-1B Nonimmigrant Petitioner Fees

NSF revenue from H-1B fees is projected to be \$199 million, 3 percent above FY 2023 level. As required by law, approximately 75 percent of these funds will go to support the Scholarships in STEM program (S-STEM) program and 25 percent of the funds will be used to support the Innovative Technology Experiences for Students and Teachers (ITEST) program. In response to language in the *CHIPS and Science Act of 2022*, NSF will increase the maximum individual scholarship amount from \$10,000 per year to \$15,000 per year for undergraduate students and \$20,000 per year for graduate students for up to five years. Through the S-STEM program, NSF expects to support up to 250 Masters or PhD students in FY 2024.

Graduate Education

NSF Research Traineeships (NRT) would be funded at \$63 million, 3 percent over the FY 2023 base total level but \$26 million below the total FY 2023 funding including funding from the *CHIPS and Science supplemental*. The Graduate Research Fellowships Program (GRFP) would grow 18 percent over FY 2023 total funding to \$380 million. In FY 2024, the GRFP will support at least 2,500 new fellowships, with a cost of education allowance of \$16,000, an increase from the previous level of \$12,000, and a stipend of \$37,000 per fellow. NSF continues to encourage applications to the GRFP that align with the agency's priority topical areas. NSF also plans to increase funding for postdoctoral fellowships by \$44 million or 61 percent compared with FY 2023.

Additional Programs of Interest (all comparisons are to FY 2023 levels)

- **Biological Integration Institutes (BII):** Up 52.5 percent to \$56.68 million. The increase will support five new awards along with the existing 15 centers.
- **Engineering Research Centers (ERC):** Up 25.3 percent to \$86.09 million. The increase will support up to four new centers as the Class of 2024.



- **Science and Technology Centers (STC):** Flat funding at \$74.6 million. This includes STCs from the FY 2016 and FY 2021 cohorts and new centers to be funded in FY 2023. Note that STC funding will increase to up to \$6 million per year for each center in FY 2023.
- **Materials Research Science and Engineering Centers (MRSEC):** Essentially flat funded at \$57 million. Funding in FY 2024 will continue support of the 11 centers established in FY 2020 and up to 8 new centers from the FY 2023 competition.
- **CAREER:** Down 11.3 percent to \$380 million, enabling funding of 680 new awards.
- **Long-Term Ecological Research Sites:** Up 6.9 percent to \$32.9 million.
- **Centers for Chemical Innovation (CCI):** Essentially flat at \$28 million. NSF plans to fund up to seven Phase II awards in FY 2024, including up to six continuing centers and one new center.

Proposed Reductions and Terminations

NSF Big Ideas

The FY 2024 budget request outlines the agency's plans to sunset most of the NSF Big Ideas (that were first introduced by Director France Córdoba in May 2016) and instead incorporate these programs into core NSF activities. The Understanding Rules of Life (URoL) Big Idea has evolved to a new activity in the BIO Directorate focused on Using the Rules of Life. The Harnessing the Data Revolution Big Idea has created new knowledge, researchers, and communities that will feed into FY 2024 investments in programs such as Accelerating Computation-Enabled Discovery. The Future of Work at the Human Technology Frontier (FWHTF) Big Idea will sunset, but related new investments will be included in programs such as Future Manufacturing, clean energy research hubs, circular economy engineering and science, and sustainable regional systems research. Finally, the Quantum Leap Big Idea was previously replaced by the QIS program that is outlined above.

The Growing Convergence Research program would continue at \$16.43 million, up 3 percent from FY 2023 funding. Navigating the New Arctic will be replaced with a new, broader initiative focused on engaging with local communities. Windows on the Universe will continue to fund astrophysics projects. The Eddie Bernice Johnson INCLUDES Initiative and Midscale Research Infrastructure programs will continue and are discussed above.

National Science Foundation



National Science Foundation (in millions of \$)

	FY 2022 Actual	FY 2023 Base Total	FY 2023 Base Total plus \$335 CHIPS Supplemental	FY 2024 Request	FY 2024 Request vs. FY 2023 Base Total
NSF, total discretionary	8,675.61	9,539.01	9,874.01	11,314.68	1,775.67 (18.6%)
Research and Related Activities	6,964.66	7,614.30	7,824.30	9,029.90	1415.60 (18.6%)
Biological Sciences	831.62	856.98	856.98	972.41	115.43 (13.5%)
Computer and Information Science and Engineering	1,014.72	1,050.57	1,050.57	1,172.14	121.57 (11.6%)
Engineering	774.53	808.80	808.80	970.00	161.20 (19.9%)
Geosciences	1,580.40	1,613.31	1,613.31	1,801.98	188.67 (11.7%)
Mathematical and Physical Sciences	1,615.26	1,683.34	1,683.34	1,835.79	152.45 (9.1%)
Social, Behavioral, and Economic Sciences	285.86	313.20	313.20	360.60	47.40 (15.1%)
Translation, Innovation, and Partnerships	413.09	670.00	880.00	1,185.63	515.63 (77.0%)
International Science and Engineering	54.23	69.32	69.32	71.21	1.89 (2.7%)
Office of Polar Programs	544.68	545.16	545.16	565.60	20.44 (3.7%)
Integrative Activities	393.30	547.03	547.03	658.37	111.34 (20.4%)
US Arctic Research Commission	1.66	1.75	1.75	1.77	0.02 (1.1%)
STEM Education	1,146.72	1,246.00	1,371.00	1,444.18	198.18 (15.9%)
Major Research Equipment and Facilities Construction	120.60	187.23	187.23	304.67	117.44 (62.7%)
Agency Operation and Award Management	420.21	463.00	463.00	503.87	40.87 (8.8%)

National Science Foundation



National Science Foundation

(in millions of \$)

National Science Board	4.52	5.09	5.09	5.25	0.16 (3.1%)
Office of Inspector General	18.89	23.39	23.39	26.81	3.42 (14.6%)

*The amounts shown for FY 2022 actual, and FY 2023 base total are taken from the NSF budget request. FY 2023 base total amounts capture both the FY 2023 Omnibus appropriation and the Disaster Relief Supplemental base.

Source: The full NSF FY 2024 Budget Request can be viewed at <https://beta.nsf.gov/about/budget/fy2024>.

Department of State and United States Agency for International Development



The budget request would provide \$70.5 billion for the Department of State (DOS) and U.S. Agency for International Development (USAID), which would represent a 15 percent increase relative to the FY 2023 enacted level excluding consideration of emergency supplementals to address the COVID-19 pandemic or to support the people of Ukraine.

Quick Take: The President’s FY 2024 budget request promotes the Administration’s goals to engage internationally to: support Ukrainian defense efforts; invest in programs and policies to out-compete China and strengthen alliances in the Indo-Pacific; combat climate change and increase global energy security, infrastructure, and resilience; reinforce global health leadership; and counter global threats to democracy. Further, the request also provides significant support for priority regions including Central America, Haiti, and the Indo-Pacific. The budget request proposes a 19.5 percent increase to foreign assistance programs relative to FY 2023 enacted levels, a small portion of which may be available to support focused research or capacity building activities.

Major Cuts/Eliminations: There are no major cuts or eliminations highlighted in the Congressional Budget Justification that are directly relevant to the academic community.

New Initiatives/Priorities: This year’s budget request is especially focused on advancing policies and programs to advance U.S. diplomatic and national security objectives to remain competitive with China. Accordingly, the request includes details on several new initiatives designed to elevate U.S. interests in the Indo-Pacific, as well as to maintain U.S. competitiveness. Like last year, the FY 2024 request is aligned with the five pillars of the DOS and USAID [2022-2026 Joint Strategic Plan](#), which was released in coordination with last year’s Congressional Budget Justification.

The Bottom Line

The Department of State and USAID FY 2024 budget request indicates the Biden Administration’s intention to continue its work with international partners to address pressing global challenges. Nonetheless, the modest proposed increases relative to FY 2023 enacted levels, along with a divided congress, suggests that there will be few new programmatic opportunities. Further, the Administration is likely to continue to prioritize U.S. contributions to multilateral institutions and other mandatory funding over discretionary bilateral programs.

State and USAID Program Funding
(In Thousands)



Department of State and United States Agency for International Development



Proposed Reductions and Terminations

Given the slight proposed increases to DOS and USAID discretionary budgets, some programs were proposed for slight (e.g., less than 5 percent) declines relative to the FY 2023 levels to accommodate increases to other priority areas. The request also provides \$290.7 million or a \$65 million (18.3 percent) reduction for the Democracy Fund, which supports DOS and USAID programming to advance democracy, human rights, and governance that higher education institutions often play a role in.

Relevant New and Signature Initiatives

The proposed budget would significantly increase DOS attention to and support of policies and programming regarding strategic competition with China and supporting Ukraine in its efforts to counter Russian aggression. Included in these efforts is \$400 million for the Countering People's Republic of China (PRC) Influence Fund, which aims to counter propaganda and promote accountability and transparency with China. Additionally, the budget request proposes a new, interagency initiative to Out-Compete the PRC in support of the Partnership for Global Infrastructure and Investment (PGII) - a collaborative effort by the G-7 to counter China's Belt and Road Initiative. This new initiative includes \$2 billion for supporting high-quality, hard infrastructure projects; \$2 billion for reinforcing Indo-Pacific economies and improving our partnerships; and \$2 billion for a new fund at the U.S. International Development Finance Corporation (DFC) for global equity investments.

Further, the budget also provides details about how DOS intends to implement the new International Technology Security Innovation Fund (ITSI Fund), which was funded at \$100 million per year for five years starting in FY 2023 under the *CHIPS and Science Act of 2022* to "provide for international information and communications technology security and semiconductor supply chain activities, including to support the development and adoption of secure and trusted telecommunications technologies, secure semiconductors, semiconductor supply chains, and other emerging technologies." If enacted, DOS would use this fund to support crucial needs across three stages of the semiconductor supply chain including production of critical materials (\$6 million), international policy coordination (\$6 million), capacity building in the Americas and Indo-Pacific (\$20 million), among other data and information projects.

Ongoing Areas of Interest

The President's FY 2024 request would fund **Global Health Programs (GHP)** at \$10.9 billion, a \$367 million (3 percent) increase relative to the FY 2023 enacted level. Much of the proposed funding would support the \$1.2 billion allocated to the **U.S. Global Health Security Strategy**, an increase of \$345 million compared to FY 2023. In contrast, funding for other bilateral global health programs was either slightly decreased or flat funded:

- HIV was proposed at \$4.7 billion, a \$25 million or 0.5 percent decrease relative to FY 2023;
- Tuberculosis was proposed at \$385 million, a \$36 million or 9 percent decrease relative to FY 2023;
- Malaria was proposed at \$780 million, \$15 million or 2 percent decrease relative to FY 2023; and
- Maternal and child health (\$910 million), nutrition (\$160 million), vulnerable children (\$30 million), and neglected tropical diseases (\$114.5 million) were proposed for flat funding.

Department of State and United States Agency for International Development



President Biden’s request would also provide at least \$4.2 billion towards **climate change activities**, of which \$2.8 billion would be contributions to multilateral funds. Of the remaining funds, a portion will be used to support discretionary bilateral climate programs, which may include research and/or capacity building components that may be relevant to institutions of higher education.

The request would also support additional funding for the **Feed the Future (FTF) initiative** to achieve the goals of the **Global Food Security Strategy (GFSS)**. Through FTF, the U.S. would support developing countries to address challenges associated with hunger, poverty, and food and water insecurity, including additional issues related to the COVID-19 pandemic, climate change, and conflict. While the Administration did not request a specific funding level for the FTF Innovation Labs, this initiative will be under USAID’s newly established Bureau for Resilience, Environment, and Food Security (REFS), which will oversee the agencies biodiversity and climate change adaptation programming.

Additionally, President Biden’s request includes more than \$395 million for a range of digital development initiatives within DOS and USAID to advance U.S. global digital and cyber policy and promote regional projects to bolster safe digital technologies, strengthen supply chain security, and enhance cooperation on digital privacy and trade. This includes funding for DOS’ Bureau of Cyberspace and Digital Policy, as well as support for digital development through USAID’s Digital Strategy.

Source: The U.S. State Department’s Congressional Budget Justification is available at https://www.state.gov/wp-content/uploads/2023/03/FY-2024-CBJ-FINAL_3.10.23-9AM.pdf.

The State Department and USAID 2022-2026 Joint Strategic Plan is available https://www.usaid.gov/sites/default/files/documents/State-USAID-FY2022-2026_JointStrategicPlan.pdf.

U.S Department of State & U.S Agency for International Development (in thousands of \$)

	FY 2023 Enacted	FY 2024 Request	FY 2024 Request vs. FY 2023
Total - State Department and USAID	56,006,675	63,070,691	7,064,016 (12.6%)
Educational and Cultural Exchange Programs	777,500	783,715	6,215 (0.8%)
Development Assistance	4,368,613	5,425,697	1,057,084 (24.2%)
Global Health Programs, Total	10,560,950	10,928,000	367,050 (3.5%)



The President's FY 2024 budget request includes \$1.8 billion in discretionary funding for the U.S. Geological Survey (USGS), which would be an increase of \$288.3 million, or 19.3 percent, compared to the FY 2023 enacted level.

Quick Take: The budget request proposes large increases to most USGS programs, with priorities in conservation, data modernization, and climate adaptation and resilience. USGS is looking to bolster its efforts in climate and weather data collection, forecasting, and modeling, particularly regarding wildfires, drought, and other natural hazards.

New and signature initiatives: The budget request would provide increased funding to all core USGS Mission Areas. The Energy and Mineral Resources Mission Area would receive the largest relative increase, with a proposed budget boost of \$46.5 million or 44.7 percent for total funding for \$150.8 million. Within the Ecosystems Mission Area, the National and Regional Climate Adaptation Science Centers (CASCs) would receive \$87.3 million, a substantial increase of \$24.2 million or 38.4 percent, and the Cooperative Research Units (CRUs) would receive \$29.3 million, a more modest \$1.1 million or 3.9 percent increase above the FY 2023 enacted level. Similar to prior years, the request proposes the smallest relative increase to the Water Resources Mission Area, recommending a 2.9 percent increase to its programs for a total budget of \$313.4 million and proposing a \$500,000 or 3.2 percent decrease to the Water Resources Research Act program. This program has holdings in every state, however, and for this reason has historically been well protected in Congress.

Consistent with the Administration's emphasis on enabling communities to build resilience and inform decision-making regarding new infrastructure investments, the Administration requests \$10 million for the USGS to create a portal that would consolidate and make publicly available federal climate and natural hazard data. Additionally, the budget request proposes \$6.5 million for USGS to improve the delivery of scientific data and other tools to natural resource managers to, in FY 2024, aid in the assessment of the impacts of wildfire and drought on ecosystems and water quality. The Administration would also allocate \$30 million for USGS to adopt and better utilize high-performance advanced computing to improve forecasting and data delivery. Finally, the budget request would provide a \$1 million increase to USGS and the Department of the Interior for data and information management in support of the National Nature Assessment (NNA) underway across the federal government for a total of \$1.4 million.

Ongoing areas of interest: The FY 2024 request for USGS continues to align with Biden Administration priorities in addressing climate change by promoting adaptation, resilience, conservation, and clean energy. The agency will continue to heavily focus on the impacts of wildfires on ecosystem and species health, greenhouse gas emissions monitoring and reduction, carbon sequestration, and critical minerals. As was proposed in FY 2023, the increased funding recommended for the Energy and Mineral Resources Mission Area would be dedicated to research on supply chains, potential recovery methods, and new sources of critical minerals to continue similar work funded by the *Infrastructure Investment and Jobs Act*. USGS intends to continue support for build-out, operations, and maintenance of the ShakeAlert Earthquake Early Warning System. In addition, USGS also plans to pursue complimentary efforts to improve and modernize national seismic monitoring infrastructure. Within the proposed funding increase for the CASCs, USGS intends to prioritize regional priorities, including the impacts of climate change on the Arctic, wildfire and drought, natural resources in northern regions, and coastal resources, while also providing greater support for natural and cultural resource management.

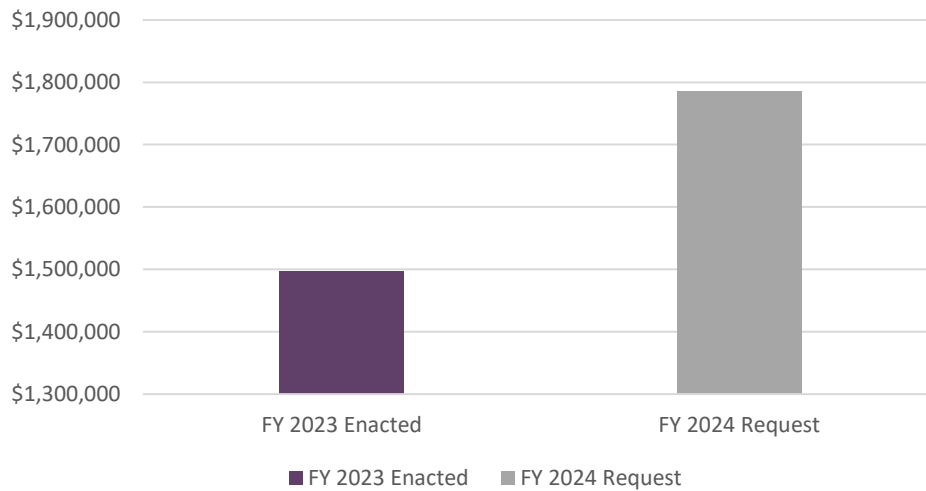
The Bottom Line

With a nearly 20 percent proposed increase in the total USGS budget, the Biden Administration hopes to position the agency as a key player in supporting and executing climate change research, as well as climate mitigation and adaptation activities through its holistic focus on ecosystems and natural hazards. While some aspects of conservation and resilience often earn bipartisan support, it is unlikely that USGS will see enacted increases to its programs under a divided government to the scale of the levels suggested in the budget request.

U.S Geological Survey



U.S. Geological Survey, Total
(In Thousands)



Source: USGS's FY 2024 Budget Justification can be found at <https://www.doi.gov/sites/doi.gov/files/fy2024-usgs-greenbook.pdf-508.pdf>.

U.S Geological Survey (in thousands of \$)

	FY 2023 Enacted	FY 2024 Request	FY 2024 Request vs. FY 2023
USGS, Total*	1,497,178	1,785,509	288,331 (19.3%)
Natural Hazards	200,256	226,163	25,907 (12.9%)
Earthquake Hazards	92,651	102,292	9,641 (10.4%)
Global Seismographic Network	7,273	7,373	100 (1.4%)
Ecosystems	307,176	394,988	87,812 (28.6%)
National and Regional Climate Adaptation Science Centers	63,115	87,343	24,228 (38.4%)
Energy and Mineral Resources	104,220	150,751	46,531 (44.7%)
Water Resources	304,434	313,353	8,919 (2.9%)
Water Resources Research Act	15,500	15,000	-500 (3.2%)
Core Science Systems	284,607	368,611	84,004 (29.5%)

U.S Geological Survey



Science Support	106,304	134,172	27,868 (26.2%)
Facilities	188,051	197,471	9,420 (5.0%)

*This total allocation does not include supplementals and transfer.

Acronym Glossary

General Terms

- FY – Fiscal Year
- OMB – Office of Management and Budget
- CR – Continuing Resolution

Department of Commerce (DOC)

- NOAA – National Oceanic and Atmospheric Administration
- OAR – Office of Oceanic and Atmospheric Research
- NERRS – National Estuarine Research Reserves Systems
- NWS – National Weather Service
- NEDIS – National Environmental Satellite, Data, and Information Service (NESDIS)
- NOS – National Ocean Service
- NMFS – National Marine Fisheries Service
- NIST – National Institute of Standards and Technology
- MEP – Hollings Manufacturing Extension Partnership
- NIMBL – National Institute for Innovation in Manufacturing Biopharmaceuticals
- EDA – Economic Development Administration

Department of Defense (DOD)

- RDT&E – Research, Development, Test, and Evaluation
- S&T – Science and Technology
- NDS – National Defense Strategy
- DARPA – Defense Advanced Research Projects Agency
- DTRA – Defense Threat Reduction Agency

Department of Education (ED)

- SEOG – Supplemental Educational Opportunity Grant
- PSLF – Public Student Loan Forgiveness
- GEAR UP – Gaining Early Awareness and Readiness for Undergraduate Programs
- TQP – Teacher Quality Partnership
- GAANN – Graduate Assistance in Areas of National Need
- IES – Institute of Education Sciences
- HSI – Hispanic Serving Institution
- MSI – Minority Serving Institution
- HBCU – Historically Black Colleges and Universities

Department of Energy (DOE)

- ARPA-E – Advanced Research Projects Agency-Energy
- CESER – Office of Cybersecurity, Energy Security, and Emergency Response
- EERE – Office of Energy Efficiency and Renewable Energy
- FECM – Office of Fossil Energy and Carbon Management
- NNSA – National Nuclear Security Administration
- OE – Office of Electricity

Acronym Glossary

Department of Health and Human Services (HHS)

- NIH – National Institutes of Health
- F&A – Facilities and Administrative costs
- ICs – Institutes and Centers
- FDA- Food and Drug Administration

Department of Health and Human Services (Other)

- GME – Graduate Medical Education
- AHRQ – Agency for Healthcare Research and Quality
- NIDILRR – National Institute on Disability, Independent Living, and Rehabilitation Research
- NIOSH – National Institute for Occupational Safety and Health
- HRSA – Health Resources and Services Administration
- CHGME – Children’s Hospitals Graduate Medical Education
- CMS – Centers for Medicare and Medicaid Services
- ACL – Administration for Community Living
- ERCs – Education and Research Centers
- CDC – Centers for Disease Control and Prevention
- SAMHSA – Substance Abuse and Mental Health Services Administration
- TANF – Temporary Assistance for Needy Families
- ACA – Patient Protection and Affordable Care Act
- ASPR – Assistant Secretary for Preparedness and Response
- SNS – Strategic National Stockpile
- MCMs – Medical Countermeasures
- IHS – Indian Health Services

Department of Homeland Security (DHS)

- S&T – DHS Science and Technology Directorate
- OUP – Office of University Programs
- CBP – U.S. Customs and Border Protection
- ICE – Immigration and Customs Enforcement
- USCIS – U.S. Citizenship and Immigration Services
- DACA – Deferred Action for Childhood Arrivals

RD&I – Research, Development, And Innovation

- POE – Port of Entry
- COE – Centers of Excellence
- ALERT – Center for Awareness and Localization of Explosive-Related Threats
- CWMD – Countering Weapons of Mass Destruction

Department of Justice (DOJ)

- FBI – Federal Bureau of Investigation
- DEA – Drug Enforcement Agency
- COPS Office – Office of Community Oriented Policing Services
- OJP – Office of Justice Programs

Acronym Glossary

- CRS – Community Relations Service
- CARA – Comprehensive Addiction Recovery Act
- PSN – Project Safe Neighborhoods
- RES – Research, Evaluation, and Statistics
- NIJ – National Institute of Justice

Department of State and U.S. Agency For International Development (USAID)

- ECE – Educational and Cultural Exchange Programs
- ECA – Bureau of Educational and Cultural Affairs
- IVLP – International Visitor Leadership Program
- DA – Development Assistance Program
- ESF – Economic Support Fund
- GCCI – Global Climate Change Initiative
- USGDL – U.S. Global Development Lab
- GHP – Global Health Programs
- CSD – Countering States Disinformation Program

Environmental Protection Agency (EPA)

- S&T – Science & Technology*
- STAR – Science to Achieve Results
- AE – Air and Energy Program
- SSWR – Safe and Sustainable Water Program
- SHC – Safe and Sustainable Water Resources Program
- SHC – Sustainable and Healthy Communities Program
- CSS – Chemical Safety for Sustainability Program
- LMS – Lean Management System

Institute of Museum and Library Services (IMLS)

National Aeronautics and Space Administration (NASA)

- STMD – Space Technology Mission Directorate
 - SMD – Science Mission Directorate
 - APD – Astrophysics Division
- WFIRST – Wide-Field Infrared Survey Telescope
- ISS – International Space Station
- ESD – Earth Science Division
- OE – Office of Education
- JWST – James Webb Space Telescope
- ARMD – Aeronautics Research Mission Directorate
- TACP – Transformative Aeronautics Concepts Program
- ULI – University Leadership Initiative
- HEOMD – Human Exploration and Operations Mission Directorate
- PSD – Planetary Sciences Division
- HPD – Heliophysics Division

Acronym Glossary

National Science Foundation (NSF)

- ENG - Directorate for Engineering
- BIO – Directorate for Biological Sciences
- CISE – Directorate for Computer and Information Science and Engineering
- EHR – Directorate for Education and Human Resources
- GEO – Directorate for Geosciences
- MPS – Directorate for Mathematical and Physical Sciences
- SBE – Directorate for Social, Behavioral and Economic Sciences
- ISE - Office of International Science and Engineering
- OIA - Office of Integrative Activities
- OPP – Office of Polar Programs

National Endowment for the Humanities (NEH) and National Endowment for the Arts (NEA)

U.S. Department of Agriculture (USDA)

- ARS – Agricultural Research Service
- NIFA – National Institute of Food and Agriculture
- SARE – Sustainable Agriculture Research Education and Extension
- APHIS – Animal and Plant Health Inspection Service
- NBAF – National Bio and Agro-Defense Facility
- AFRI – Agriculture and Food Research Initiative
- FSIS – Food Safety and Inspection Service

Department of Interior (DOI)

- U.S. Geological Survey (USGS)

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