

Analysis of the FY 2022 Omnibus Spending Package: Implications for Research, Higher Education, and Academic Medicine

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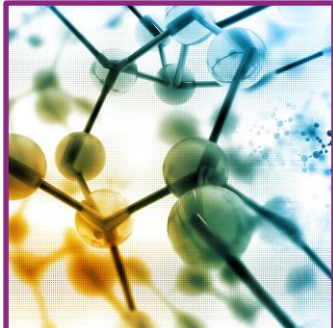


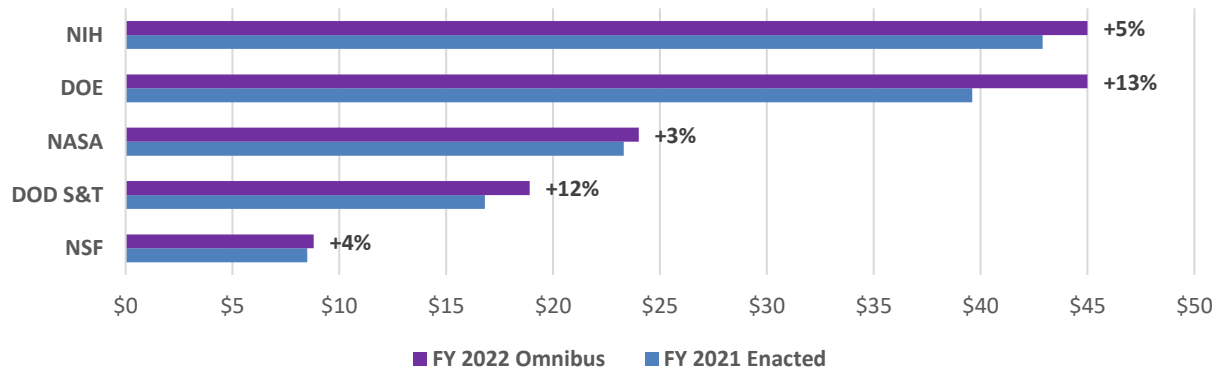
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Executive Summary

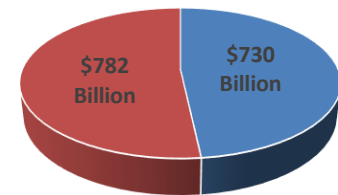
On March 11, Congress passed a massive end-of-year spending package that included \$1.5 trillion in fiscal year (FY) 2022 omnibus appropriations and \$13.6 billion in aid for Ukraine. The package had broad bipartisan support, passing the House on a vote of 361-69 and the Senate on a vote of 68-31. President Biden is expected to sign it into law before current government funding expires on March 11. Overall, the final spending package would increase funding for almost all federal programs of interest to the research, education, and academic medicine communities. However, final numbers for these programs were, for the most part, below or far below the President’s budget request and the House and Senate bills. This document provides an in-depth analysis of final FY 2022 appropriations.

FY 2022 Funding For Select Federal Agencies (\$ in billions)



Six months into FY 2022 and after three Continuing Resolutions that extended government operations to avoid shutdowns, Congress finally reached agreement on a \$1.5 trillion spending package that includes all 12 annual appropriations bills, known as an omnibus. As a condition for their support, which was needed to pass final spending bills, Republicans insisted on parity of funding between defense and non-defense programs. The final spending package increased non-defense spending by 6.7 percent and defense spending by 5.6 percent. This outcome is in sharp contrast to President Biden’s proposal to increase non-defense spending by 16 percent and defense spending by just 1.7 percent, as well the distribution of funding proposed in the original House and Senate FY 2022 appropriations bills that provided significantly more funding for non-defense programs.

FY 2022 Omnibus Spending Package \$1.512 Trillion



■ Defense Spending ■ Non-defense Spending

As a result of this overall spending deal, many of the increases for science, research and development, climate and environment, education, and workforce development programs are more modest than those proposed in the FY 2022 President’s budget request and in the House and Senate bills. For example, the National Science Foundation (NSF) would see an increase of \$351 million compared to the nearly \$1 billion proposed in the Senate appropriations bill, and the National Institutes of Health (NIH) would see an increase of \$2.25 billion compared to the

\$3.5 billion proposed in the House appropriations bill. Despite more modest growth, several signature Biden Administration initiatives moved forward, such as \$1 billion to fund an Advanced Research Projects Agency for Health (ARPA-H) outside the base NIH budget; the creation of a new NSF Directorate for Technology, Innovation, and Partnerships (TIP); and increased funding at agencies such as the Departments of Transportation and Energy to help fully implement new or expanded programs in the bipartisan infrastructure bill. See additional highlights in the side bar.

For higher education, the spending package prioritizes investments in the Pell Grant program for low-income students and capacity-building programs for Historically Black Colleges and Universities and Minority-Serving Institutions, as well as increased funding for Department of Labor apprenticeship efforts. For health care and academic medicine, the spending package would extend certain telehealth flexibilities issued at the start of the current COVID-19 public health emergency and would provide additional funding for mental health and substance use disorder treatment programs, rural health efforts, and maternal and child health initiatives.

With FY 2022 finalized, Congress is already pivoting to FY 2023 appropriations. The Biden Administration expects to release the FY 2023 President's budget request in late March or early April, officially kicking off the Congressional FY 2023 appropriations process. Congress is unlikely to finalize FY 2023 appropriations before the end of the fiscal year on September 30. Without a budget agreement in place and midterm elections in November, Congress will likely need a Continuing Resolution through November or December before charting a path forward to finalize FY 2023 appropriations. In the meantime, federal agencies will be focused on spending FY 2022 appropriations with only six months left in the fiscal year. Federal agencies are poised to release a large number of funding opportunities that were pending final appropriations.

Below is more detailed information on FY 2022 appropriations for each major federal agency.

Highlights of FY 2022 Spending Package

- \$1.5 trillion omnibus - all 12 appropriations bills included
- \$1 billion to establish ARPA-H
- Establishes a new Directorate for Technology, Innovation, and Partnerships (TIP) at NSF
- Moderate to substantial increases for all federal R&D agencies
- Increased investments in all emerging technology areas, such as quantum information science, microelectronics, artificial intelligence and machine learning, biotechnology, and advanced computing
- Increased funding for climate science across all federal agencies, including NSF, DOE, and NOAA
- Increased funding for all clean energy R&D programs at DOE
- \$400 increase to maximum Pell award
- Increased funding for mental health and substance use disorder treatment programs, rural health efforts, and maternal and child health initiatives
- Telehealth flexibilities extended
- FY 2022 Intelligence Authorization bill included

Department of Commerce



Department of Commerce

Economic Development Administration

Economic Development
Administration



The Economic Development Administration (EDA) would receive \$373.5 million, a \$27.5 million increase over the FY 2021 level, but \$59.6 million below the president's FY 2022 budget request.

The bill would fund the Regional Innovation Program (RIP), rebranded by EDA as Build to Scale) at \$45 million. This is a \$7 million increase from FY 2021 but \$5 million below RIP's most recent authorization level. RIP provides universities and research institutes support to develop and scale commercialization efforts and cultivate funding for promising start-ups. The omnibus calls on EDA to ensure that RIP awards prioritize geographic diversity, increase distribution of grants to organizations and states that have not been previously funded by RIP, and award at least 40 percent of program funds to rural areas. The omnibus report specifies that of the \$45 million provided for RIP, \$38 million is to be spent on the i6 challenge (now called the "Venture Challenge" by EDA) and \$7 million is for Seed Fund Support (currently called the "Capital Challenge").

The Public Works Program would receive \$120.5 million, a \$1 million increase over FY 2021. The Economic Adjustment Assistance (EAA) and STEM Apprenticeship programs would be flat funded at FY 2021 levels of \$37.5 million and \$2 million, respectively. EDA's Research and Evaluation program would receive \$2 million in FY 2022 funding, which is \$500,000 above the FY 2021 enacted level and consistent with the President's budget request. Finally, the omnibus would provide \$62.5 million for communities dealing with the closures of coal (\$41.5 million), nuclear (\$16.5 million), or biomass (\$4.5 million) power plants.

In addition to provision of funding, the omnibus report directs EDA to take several actions, including coordinating with regional development organizations to support rural economic development; considering geographic equity when making grants and making sure rural projects are adequately represented; increasing the share of investments in persistent poverty and high-poverty communities; and ensuring that its grant programs are not duplicative of other federal grant programs. The bill also redefines "high-poverty area" to mean any census tract with a poverty rate of at least 20 percent, measured by the most recent five-year data series from the American Community Survey of the Census Bureau, and requires EDA to submit a report to Congress on efforts to improve the economies of persistent poverty areas and the economic impact of such efforts. This is important as poverty rates play a key role in programs such as Public Works and EAA.

Furthermore, the omnibus encourages EDA to invest in a number of areas that demonstrate the priorities of Congress, including public-private partnerships to diversity the local workforce of distressed communities; economic development projects that address disparities in essential health services in rural and economically distressed areas; technical assistance to EDA grant applicants from areas that

have been negatively impacted by the decline in manufacturing; support to communities looking to expand aeronautics-related industries; and broadband infrastructure projects in underserved areas, especially those that address challenges facing rural communities.

Economic Development Administration

(in thousands of \$)

	FY 2021 Enacted	FY 2022 Request	FY 2022 House	FY 2022 Senate	FY 2022 Omnibus	Omnibus vs. FY 2021 Enacted
Economic Development Administration (EDA)	346,000	433,110	433,110	395,000	373,500	27,500 (7.95%)
Regional Innovation Program	38,000	45,000	50,000	50,000	45,000	7,000 (18.4%)
Public Works Program	119,500	124,000	124,000	124,000	120,000	500 (0.4%)
Economic Adjustment Assistance Program	37,500	48,000	42,500	40,000	37,500	--
Research and Evaluation Program	1,500	2,000	2,000	2,500	2,000	500 (33.3%)
STEM Apprenticeship Program	2,000	10,000	10,000	5,000	2,000	--

Source:

- The Joint explanatory statement of Division B, COMMERCE, JUSTICE, SCIENCE, AND RELATED AGENCIES is available at <https://docs.house.gov/billsthisweek/20220307/BILLS-117RCP35-JES-DIVISION-B.pdf>.

National Institute of Standards and Technology



The National Institute of Standards and Technology (NIST) would receive \$1.23 billion in the final FY 2022 spending package, a nearly 19 percent increase compared to the FY 2021 level. While this is a significant increase for NIST, the funding level is \$164.1 million below the Senate proposed amount, \$139.0 million below the House proposal, and \$267.14 million below the President’s request.

The omnibus bill includes \$174.5 million for the **Industrial Technology Services** account, a 4.8 percent increase compared to FY 2021, which funds a majority of the NIST’s manufacturing activities. The bill includes \$158 million for the **Hollings Manufacturing Extension Partnership (MEP)**, an increase of \$8 million above the fiscal year 2021 enacted level, but \$117 million or 42.5 percent below the requested level. The bill also includes \$16.5 million for the **Manufacturing USA Program**, the same as the FY 2021 enacted level, but \$150.2 million or 90.1 percent below the requested level. Within the funding for Manufacturing USA, \$10 million would be provided for the NIST-funded institute for biopharmaceuticals and \$1 million may be used to support the U.S. Food and Drug Administration’s participation in biomanufacturing innovation institutes. Unlike the FY 2022 House and Senate bills, the final bill does not provide funding or guidance for the establishment of additional manufacturing institutes.

The bill would provide \$850 million for the Scientific and Technical Research and Services (STRS) account, a 7.8 percent increase compared to FY 2021. The bill continues funding at no less than FY 2021 levels for advanced communications research and standards, next-generation semiconductor research

and standards, the greenhouse gas program and urban dome initiative, and disaster resilience research grants.

The bill notes that “House funding levels for programs in STRS are not adopted” but does include the following provisions of interest to the academic and research community:

- No less than \$49 million for quantum information science;
- No less than \$2.5 million for the Malcolm Baldrige Performance Excellence Program;
- No less than \$2.5 million above the FY 2021 level for climate and energy measurement, tools, and testbeds, including expanded work on direct air capture and carbon dioxide removal and sequestration research, and a \$1 million increase for wildfires and wild-land interface research;
- No less than \$31 million for NIST’s AI research and measurement science, including the development of a Framework for Managing AI Risks;
- No less than \$1.5 million for cybersecurity, and encourages NIST to “address rapidly emerging threats to data privacy” through the development of cryptographic standards and technologies;
- \$20.5 million for forensic science research;
- No less than \$1 million to support work on materials, such as electronics waste, battery and solar waste, and other waste streams, in addition to continued funding for NIST’s work on the circular economy, and at least FY 2021 levels for external academic programs on recycled plastic products;
- \$2.5 million for regenerative medicine standards; and
- NIST is encouraged to establish a National Initiative for Improving Cybersecurity in Supply Chains, in partnership with the private sector.

The bill would also provide \$11.5 million for NIST to “support development of a diverse workforce and new pipelines for the next generation of innovative scientists and engineers, helping to improve diversity, inclusion, and equity in STEM careers.”

National Institute of Standards and Technology

(In thousands of \$)

	FY 2021 Enacted	FY 2022 Request	FY 2022 House	FY 2022 Senate	FY 2022 Omnibus	FY 2022 Final vs. FY 2021 Enacted
NIST, total	1,034,500	1,497,200	1,369,070	1,394,133	\$1,230,063	195,563 (18.9%)
Scientific and Technical Research and Services	788,500	915,600	937,570	913,070	850,000	61,500 (7.8%)
Industrial Technology Services	166,500	441,600	331,500	213,000	174,500	8,000 (4.8%)
Manufacturing USA	16,500	166,700	56,500	38,000	16,500	--
Hollings Manufacturing Extension Partnership (MEP)	150,000	275,000	275,000	175,000	158,000	8,000 (5.3%)

Source:

- The Joint explanatory statement for Division B, COMMERCE, JUSTICE, SCIENCE, AND RELATED AGENCIES is available at <https://docs.house.gov/billsthisweek/20220307/BILLS-117RCP35-JES-DIVISION-B.pdf>.

National Oceanic and Atmospheric Administration

National Oceanic and Atmospheric
Administration



The FY 2022 omnibus bill would provide NOAA with \$6.109 billion, an increase of \$678.9 million or 12.5 percent over the FY 2021 enacted level. The **Operations, Research, and Facilities** account would receive \$4.42 billion, an increase of \$583.5 million or 15.2 percent above the FY 2021 enacted level. Most NOAA research offices and programs would receive an overall increase from FY 2021 enacted levels, though the increases are less than what was proposed in the House and Senate appropriations bills and in the President's budget request.

The bill would provide \$599.4 million for the **Office of Oceanic and Atmospheric Research (OAR)**, a \$28.9 million or 5.1 percent increase over the FY 2021 enacted level. The **Climate Research Program** would receive \$200 million, \$19.3 million or 10.7 percent more than the FY 2021 enacted level. Included within this account, the climate laboratories and Cooperative Institutes (CIs) would receive \$89 million, an increase of \$13.5 million or 17.9 percent over the FY 2021 enacted level, and the competitive climate research account would receive \$66 million, an increase of 3.5 percent over FY 2021 levels. The omnibus would also provide a \$2.5 million increase over FY 2021 for OAR's Climate Adaptation Partnerships, formerly known as the **Regional Integrated Sciences and Assessments Program (RISA)**. The **Sea Grant College Program** would receive \$76 million, a \$1 million increase over the FY 2021 enacted level and the Sea Grant Aquaculture Program would receive \$13.5 million, \$500,000 more than FY 2021. The bill encourages NOAA and Sea Grant programs to increase work to enhance coastal resilience against extreme and chronic weather events. Finally, the bill would provide \$43.4 million for **Ocean Exploration and Research**, nearly flat funding compared to the FY 2021 enacted level.

The **National Ocean Service (NOS)** would receive \$637.7 million, an increase of \$18 million or 2.9 percent over the FY 2021 enacted level. The bill would provide flat funding of \$79 million for **Coastal Zone Management Grants** and \$34 million for the **National Oceans and Coastal Security Fund**; however, the bill notes that the Fund received an additional \$492 million over five years in the *Infrastructure Investment and Jobs Act*. The bill would provide \$50 million, a \$3 million increase over FY 2021, to the **National Centers for Coastal Ocean Science (NCCOS)** and encourages work related to sea level rise. Additionally, the omnibus would provide \$10 million to OAR, NOS, and the National Environmental Satellite, Data, and Information Service (NESDIS) for Climate Change Adaptation and Resilient Infrastructure, specifically to develop a global-nested, high-resolution atmospheric model which would allow for the delivery of more accurate and geographically-focused climate services across all timescales.

The **National Marine Fisheries Service (NMFS)** would receive \$1.07 billion, an increase of \$51.1 million or 5.3 percent over the FY 2021 enacted level. The bill directs NOAA to assist in transitioning to and supporting the growth of climate ready fisheries. The bill would fund offshore wind energy initiatives at \$6.25 million, including "\$2,000,000 in Marine Mammals, Sea Turtles, and Other Species; \$3,000,000 in

Fisheries and Ecosystem Science Programs and Services; and \$1,250,000 in Fisheries Management Programs and Services.”

The **National Weather Service (NWS)** would be funded at \$1.174 billion, an increase of \$73.7 million or 6.7 percent over the FY 2021 enacted level. This would include \$161.6 million for the Office of Science and Technology Integration, a small increase of \$6 million over the enacted level.

National Oceanic and Atmospheric Administration

(In thousands of \$)

	FY 2021 Enacted	FY 2022 Request	FY 2022 House	FY 2022 Senate	FY 2022 Omnibus	FY 2021 Enacted vs Omnibus
NOAA, total	5,430,607	6,983,329	6,458,136	6,276,198	6,109,532	678,925 (12.5%)
Operations, Research, and Facilities (ORF)	3,840,300	4,689,381	4,689,458	4,451,783	4,423,843	583,543 (15.2%)
Oceanic and Atmospheric Research (OAR)	570,590	762,169	684,500	679,990	599,448	28,858 (5.1%)
<i>Climate Research</i>	180,652	293,713	253,000	232,920	200,000	19,348 (10.7%)
<i>Climate Competitive Research</i>	63,795	130,793	74,000	70,000	66,000	2,205 (3.5%)
<i>Ocean, Coastal and Great Lakes Research</i>	230,148	294,859	260,250	274,500	237,020	6,872 (3%)
<i>Sea Grant and Marine Aquaculture Program</i>	87,950	128,818	99,500	105,000	89,000	1,050 (1.2%)
<i>Ocean Exploration and Research (OER)</i>	42,639	43,410	44,500	45,000	43,410	771 (1.8%)
National Weather Service (NWS)	1,100,776	1,216,585	1,218,113	1,224,963	1,174,470	73,694 (6.7%)
National Ocean Service (NOS)	619,700	853,908	706,500	705,750	637,700	18,000 (2.9%)
Coastal Science and Assessment: Competitive Research	21,000	42,000	28,000	29,000	21,500	500 (2.4%)
National Oceans and Coastal Security Fund	34,000	68,000	38,000	36,000	34,000*	--
National Marine Fisheries Service (NMFS)	964,862	1,099,327	1,044,590	1,073,950	1,015,955	51,093 (5.3%)
Procurement, Acquisition, and Construction (PAC)	1,532,558	2,226,982	1,998,000	1,776,718	1,685,689	153,131 (10%)
National Environmental Satellite, Data, and Information Systems	1,224,924	1,677,319	1,482,066	1,372,989	1,294,989	70,065 (5.7%)

*While the National Oceans and Coastal Security Fund receives flat funding from the omnibus legislation, it did receive \$492 million over five years in the Infrastructure Investment and Jobs Act including \$98.4 million in FY 2022 bringing total funds for FY 2022 to 132.4 million.

Source:

- The joint explanatory statement for Division B, COMMERCE, JUSTICE, SCIENCE, AND RELATED AGENCIES is available at <https://docs.house.gov/billsthisweek/20220307/BILLS-117RCP35-JES-DIVISION-B.pdf>.

Department of Defense



Department of Defense

The fiscal year (FY) 2022 defense appropriations bill would provide \$728.5 billion in discretionary spending to the Department of Defense (DOD), a \$32.5 billion increase over the FY 2021 enacted level and \$13.5 billion above the FY 2022 President’s budget request (PBR). As mentioned, the bill would provide a \$13.6 billion supplement for emergency assistance for Ukraine, including positioning troops in Europe and providing weapons to Ukraine.

The Department’s Research, Development, Test & Evaluation (RDT&E) accounts would receive \$119.2 billion, an overall increase relative to the PBR, the FY 2021 enacted level, and the FY 2022 House and Senate appropriations bills—a win for the research community. More specifically, the Department’s science and technology (S&T) accounts, which include basic research (6.1), applied research (6.2), advanced technology development (6.3), would be funded at \$18.8 billion, a 12 percent increase, compared to FY 2021. Basic research accounts across the Services and Defense-wide would receive an overall 5 percent increase, including a 10.4 percent increase for Army and a 7.4 percent increase for Navy basic research accounts. Additional information on funding levels and trends is included in the chart below.

Additionally, this bill would prioritize funding for the Department’s modernization and use of next-generation technologies—including artificial intelligence (AI) and microelectronics-- and include provisions for quantum, hypersonics, and space research:

Artificial Intelligence

- The Army would receive a \$20 million increase for AI innovation at university and industry research centers as well as \$30 million for basic and applied research in AI and machine learning technologies.
- The Navy would receive a \$9 million increase for advanced machine learning and AI for future naval capabilities.
- The Defense Advanced Research Projects Agency (DARPA) would receive \$70 million increase for data analytics, cybersecurity, and AI research efforts.
- The bill would provide a \$5 million increase for AI basic research in extreme environments.
- The bill would provide \$200 million to improve tactical AI at combatant commands.

Microelectronics

- DARPA would receive a \$80 million increase for the Electronics Resurgence Initiative 2.0.
- The bill would provide \$209 million for defense-wide microelectronics technology development and support.

Quantum Information Science

- The Air Force would receive \$221.1 million for dominant information sciences and methods, including funding increases for quantum network testbeds and photonic quantum computing.
- The bill would provide \$25 million for defense-wide quantum computing efforts.

Hypersonics

- The Air Force would receive a \$10 million increase for hypersonics supply chain research and a \$20 million increase for hypersonics risk reduction.
- The bill would provide a \$4.6 million increase for “emerging capabilities technology development,” including a “hypersonics modeling and simulation center of excellence.”
- DARPA would receive \$100 million increase for continued risk reduction, development, and testing of hypersonics weapons and space capabilities.

Space Force

The bill would provide Space Force with \$15 million for fundamental research, which is significantly lower than the \$75 million recommended for Space Force basic research in the FY 2022 Senate defense appropriations bill. This funding is likely to be carried out by the Air Force Research Laboratory (AFRL), and the bill acknowledges the benefits of collaboration between Space Force and the Air Force on basic research and development programs. However, the bill notes that the unique space capabilities and programs in the Space Vehicles Directorate should be budgeted out of the Space Force RDT&E account and requires the Air Force submit a report on how they plan to “align the Department of the Air Force’s science and technology resources across the R&D continuum.” The bill would also provide a \$25 million increase for the Air Force basic research account, which conducts some space-focused basic research. In addition, the bill would provide for significant increases to the Space Force’s 6.2 and 6.3 accounts, with 6.2 receiving a \$110.7 million and 6.3 receiving a \$211.9 million in FY 2023.

Other notable provisions in the bill include:

- \$145.2 million for the National Defense Education Program (NDEP), including a \$2 million increase for SMART diversification activities; a \$14 million increase for science, technology, engineering, and mathematics (STEM) programs; a \$2 million increase for civics education; and a \$15 million increase for civil society.
- \$100 million for Historically Black Colleges and Universities (HBCUs), a nearly \$68.8 million program increase.
- \$85 million increase to the Defense University Research Instrumentation Program (DURIP) across all Service Branches, with the Navy receiving a \$35 million increase and the Army and Air Force each receiving a \$25 million increase.
- \$10 million increase for the Minerva research initiative, the DOD’s social science basic research program.
- \$15 million funding increase for the National Security Innovation Network (NSIN), which funds collaborative projects with universities.
- \$19 million increase to fund the Defense Established Programs to Stimulate Competitive Research (DEPSCoR) program, which provides opportunities for funding to institutions in states that do not receive significant research funding from DOD.
- \$10 million increase for academic cyber institutes.
- \$40 million increase for the Strategic Environmental Research and Development Program (SERDP) and a \$51 million increase for the Environmental Security Technical Certification

Program (ESTC), with funding increases for per-and polyfluoroalkyl substances (PFAS) remediation and disposal technology.

- \$370 million for the Peer Review Medical Research Program (PRMRP) and \$130 million for the Peer Review Cancer Research Program within the Congressionally Directed Medical Research Program (CDMRP).
- The bill would direct the Secretary of Defense to report to Congress on the scope, scale, and impact of the Cyber Education Diversity Initiative, including participating institutions, funds to support the program, and an evaluation of the initial impact on cyber education.

Department of Defense

*As reported by the Senate Appropriations Committee on March 9, 2022
(in thousands of \$)*

	FY 2021 Enacted	FY 2022 Request	FY 2022 House	FY 2022 Senate	FY 2022 Omnibus	Omnibus vs. Enacted
RDT&E, total	107,135,164	111,964,188	110,368,824	116,152,543	119,211,192	12,076,028 (11.3%)
S&T, Total	16,816,487	14,685,278	16,003,435	17,672,089	18,892,284	2,075,797 (12.3%)
6.1, Total	2,625,796	2,282,934	2,441,498	3,005,434	2,763,498	137,702 (5.2%)
6.2, Total	6,436,330	5,508,884	5,924,283	6,531,879	6,908,213	471,883 (7.3%)
6.3, Total	7,754,361	6,893,460	7,637,654	8,134,776	9,220,573	1,466,212 (18.9%)
Army RDT&E	14,144,856	12,799,645	13,381,427	13,467,949	14,539,417	394,561 (2.8%)
Army 6.1	552,521	473,475	535,725	681,475	609,725	57,204 (10.4%)
Army 6.2	1,518,770	914,288	1,150,305	1,302,188	1,531,255	12,485 (0.8%)
Army 6.3	1,940,015	1,297,437	1,667,538	1,735,037	2,191,638	251,623 (13.0%)
Navy RDT&E	20,138,391	22,639,362	20,694,650	21,546,521	22,139,080	2,000,689 (9.9%)
Navy 6.1	650,180	601,869	632,319	803,869	698,319	48,139 (7.4%)
Navy 6.2	1,179,053	975,915	1,081,594	1,157,000	1,283,233	104,180 (8.8%)
Navy 6.3	835,756	777,788	821,328	872,388	972,196	136,440 (16.3%)
Air Force RDT&E	36,360,842	39,184,328	39,062,352	40,098,662	41,592,913	5,232,071 (14.4%)
Air Force 6.1	536,314	490,706	490,706	665,706	540,706	4,392 (0.8%)
Air Force 6.2	1,560,836	1,312,490	1,413,080	1,448,990	1,585,571	24,735 (1.6%)
Air Force 6.3	1,000,257	733,986	890,248	748,510	968,538	-31,719 (3.2%)

Space Force RDT&E*	10,540,069	11,266,387	10,774,318	11,642,581	11,597,405	1,057,336 (10.0%)
Space Force 6.2*	216,874	175,796	190,696	353,306	286,505	69,631 (32.1%)
Space Force 6.3*	--	76,653	82,584	298,653	288,584	288,584 (--)
Defense Wide RDT&E	26,013,489	25,857,875	26,239,486	29,120,239	29,065,786	3,052,297 (11.7%)
Defense Wide 6.1	886,781	716,884	782,748	854,384	914,748	27,967 (3.2%)
Defense Wide 6.2	1,960,797	2,130,395	2,088,608	2,270,395	2,221,649	260,852 (13.3%)
Defense Wide 6.3	3,978,333	4,007,596	4,175,956	4,480,188	4,799,617	821,284 (20.6%)
Defense Health R&D	2,392,579	630,680	1,836,680	1,849,627	2,633,488	240,909 (10.1%)

**The Space Force RDT&E, 6.2, and 6.3 lines are not new efforts initiated in FY 2021, but rather space-related efforts within the Air Force that have been transitioned to the newly established Space Force.*

Source:

- The joint explanatory statement for Division C, DEPARTMENT OF DEFENSE, is available at https://docs.house.gov/billsthisweek/20220307/BILLS-117RCP35-JES-DIVISION-C_Part1.pdf; and https://docs.house.gov/billsthisweek/20220307/BILLS-117RCP35-JES-DIVISION-C_Part2.pdf



Department of Education

The Department of Education (ED) would receive \$76.4 billion in discretionary appropriations, \$2.9 billion more than FY 2021, but well below the President's budget request of over \$100 billion for the Department. Similar to other non-defense agencies, ED programs would generally receive increases over the previous year funding allocations but at lower levels than initially forecasted by the House and Senate appropriations bills for FY 2022.

For **Pell Grants**, the omnibus would provide \$6,895 for the maximum individual Pell Grant award for the 2022-2023 school year, a \$400 increase over the current maximum award level. The omnibus would also provide small 1.7 percent increases for the **Supplemental Education Opportunity Grants (SEOG)** program and the **Federal Work-Study (FWS)** program, which would be provided \$895 million and \$1.21 billion, respectively. The spending agreement would rescind \$1.05 billion from the Pell reserve.

Similarly, the **TRIO Programs** would receive up to \$1.14 billion, a 3.6 percent increase or \$40 million over current levels. The omnibus would increase funding for the **Title VI International Education and Foreign Language Studies** programs, including a \$3.5 million increase, totaling \$81.6 million for those programs. The omnibus would also increase funding for the **Child Care Access Means Parents in School (CCAMPIS)** program to \$65 million, an increase of \$10 million above current levels. The explanatory statement would lift the statutory cap on grant awards to institutions of higher education. The spending package would flat fund the **Graduate Assistance in Areas of National Need (GAANN)** program at \$23.5 million.

While the proposed Title V **Developing Hispanic Serving Institutions (Developing HSIs)** program and the **Promoting Post-Baccalaureate Opportunities for Hispanic Americans (PPOHA)** program funding increases are more modest than initially proposed under the House and Senate marks, the omnibus bill would provide nearly \$182.9 million for Developing HSIs, a 23 percent increase above the enacted level, and nearly \$20 million for PPOHA, a 42 percent increase. Additionally, the **Strengthening Asian American and Native American Pacific-Islander-Serving Institutions (AANAPISI)** program would receive \$10.9 million, doubling from the current level.

Under the **Fund for the Improvement of Postsecondary Education (FIPSE)** account, ED would be provided \$76 million for grant programs and \$249 million for congressional directed spending. For FIPSE grant competitions, the omnibus would provide \$8 million to support the **Augustus F. Hawkins Centers of Excellence** program for HBCU/MSI teacher preparation programs, which has been authorized for years but unfunded. The omnibus would also fund: the **Basic Needs Grant** program at \$8 million, the **Centers of Excellence for Veterans Student Success** program at \$8.5 million, the **Open Textbook Pilot** program at \$11 million, the **Modeling and Simulation** education program at \$8 million, the **Transitioning Gang-Involved Youth to Higher Education** program at \$1.5 million, and the **Rural Postsecondary and Economic Development Grant Program** at 20 million. Four-year HBCUs and MSIs

would now be eligible for the Basic Needs Grants program. New this year for FIPSE, the omnibus would fund a **Center of Excellence in Spatial Computing** program at \$2 million and a new **Digital Learning Infrastructure and IT Modernization Pilot** at \$4 million, which will support IT modernization at HBCUs and MSIs to improve digital learning infrastructure.

The omnibus would increase funding for the **Institute of Education Sciences (IES)**, the Department’s primary education research entity, by \$95 million, which is a 14.7 percent increase over FY 2021 levels, for a total of \$737 million for IES in FY 2022. While most of the increase would go toward administrative expenses to cover a budget shift, the national K-12 assessment programs would receive a \$15 million increase and the Research, Development, and Dissemination activities would see a \$7 million increase. Congress also requests IES respond on the lack of membership and lack of operation of the National Board on Education Sciences (NBES). In other research areas, the omnibus would fund the **Education and Innovation Research (EIR)** program at \$234 million for FY 2022, a \$40 million increase from current levels. Of the EIR total, \$82 million would be directed toward grants for social and emotional learning (SEL) and \$82 million for STEM education and computer science focused awards.

Additionally, \$55 million would be provided for the **Mental Health Services Professional Demonstration Grants** program and \$56 million would be provided for the **School-Based Mental Health Services Grants** program. ED would be directed to work with HHS to support expanded access to mental health services for children and adolescents, including through school-based health centers.

Along with the nearly \$250 million in congressionally directed spending in the higher education account of FIPSE, the omnibus also includes \$140 million in congressionally directed spending as part of the elementary and secondary education focused innovation account. In addition to appropriations, the omnibus details congressional interest in student loan servicing contracting and accountability. ED would also be permitted to use funds for higher education programs (aside from the Pell Grant program) for evaluation. The bill also includes a reauthorization of the Violence Against Women Act (VAWA). Of relevance to higher education, the VAWA bill will require institutions to carry-out a campus climate survey every two years.

Department of Education <i>(in thousands of \$)</i>						
	FY 2021 Enacted	FY 2022 Request	FY 2022 House	FY 2022 Senate	FY 2022 Omnibus	Omnibus vs. Enacted
Elementary and Secondary Education*						
Promise Neighborhoods	81,000	91,000	96,000	101,000	85,000	4,000 (4.9%)
Education Innovation and Research	194,000	194,000	254,000	270,000	234,000	40,000 (20.6%)
IDEA Personnel Preparation	90,200	250,000	250,000	200,000	95,000	4,800 (5.3%)
CTE National Programs	7,421	115,421	115,421	25,000	7,421	--
Student Financial Assistance*						
Pell Grant [†]	6,495	6,895	6,895	6,895	6,895	400

						(6.2%)
SEOG	880,000	880,000	1,028,000	905,000	895,000	15,000 (1.7%)
Federal Work-Study	1,190,000	1,190,000	1,434,000	1,230,000	1,210,000	20,000 (1.7%)
Higher Education*						
Title V Aid for Developing HSIs	148,732	236,732	236,732	226,529	182,854	34,122 (22.9%)
Promoting Post-Baccalaureate Opportunities for Hispanic Americans	13,845	28,845	28,845	27,106	19,661	5,816 (42.0%)
Strengthening Institutions	109,007	209,007	209,007	187,413	110,070	1,063 (1.0%)
Strengthening Historically Black Colleges (HBCUs)	337,619	402,619	402,619	395,082	362,823	25,204 (7.5%)
Strengthening Asian American- and Native American Pacific Islander-serving Institutions (AANAPISI)	5,120	20,120	20,120	18,381	10,936	5,816 (113.6%)
Strengthening Native American-Serving Nontribal Institutions	5,120	12,120	12,120	11,308	7,834	2,714 (53.0%)
Title VI International Education and Foreign Language Studies	78,164	78,164	93,164	85,164	81,664	3,500 (4.5%)
TRIO Programs	1,097,000	1,297,761	1,297,761	1,282,761	1,137,000	40,000 (3.6%)
GEAR UP	368,000	408,000	408,000	400,000	378,000	10,000 (2.7%)
GAANN	23,547	23,547	25,547	25,547	23,547	--
Teacher Quality Partnerships	52,092	132,092	132,092	90,000	59,092	7,000 (13.4%)
Child Care Access Means Parents in Schools	55,000	95,000	95,000	110,000	65,000	10,000 (2.7%)
Hawkins Centers of Excellence [±]	--	20,000	20,000	20,000	8,000	8,000 (--)
Institute of Education Sciences	642,462	737,465	762,465	814,492	737,021	94,559 (14.7%)
Research, Development and Dissemination	197,877	267,880	260,880	267,880	204,877	7,000 (3.5%)
Research in Special Education	58,500	58,500	59,500	65,000	60,255	1,755 (3.0%)

Regional Education Laboratories	57,022	57,022	59,022	60,022	58,733	1,711 (3.0%)
Statewide Data Systems	33,500	33,500	34,500	33,500	33,500	--

*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 Augustus F. Hawkins Centers of Excellence would be a newly funded program, authorized under Sec. 242 of the Higher Education Act, located within the Fund for the Improvement of Postsecondary Education (FIPSE) per the FY 2022 omnibus.

Sources:

- Text of Consolidated Appropriations Act of 2022 [HOUSE AMENDMENT TO THE SENATE AMENDMENT TO H.R. 2471] <https://docs.house.gov/billsthisweek/20220307/BILLS-117HR2471SA-RCP-117-35.pdf>.
- Joint Explanatory Statement of Division H, DEPARTMENTS OF LABOR, HEALTH AND HUMAN SERVICES, AND EDUCATION, AND RELATED AGENCIES, at https://docs.house.gov/billsthisweek/20220307/BILLS-117RCP35-JES-DIVISION-H_Part1.pdf and https://docs.house.gov/billsthisweek/20220307/BILLS-117RCP35-JES-DIVISION-H_Part2.pdf.



Department of Energy

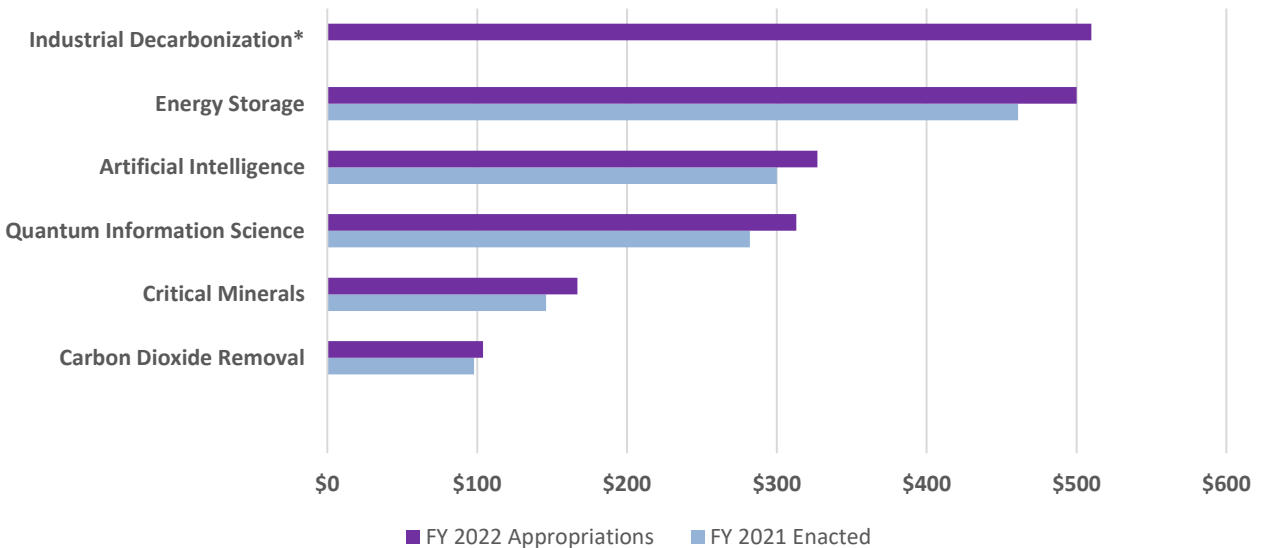
The FY 2022 omnibus would provide \$44.9 billion for the Department of Energy (DOE), which is \$5.2 billion or 13 percent above the FY 2021 enacted level. Consistent with the Biden Administration's priorities of accelerating the development and deployment of clean energy technologies to meet ambitious net zero carbon goals, the omnibus significantly increases investments in all fundamental and applied energy programs. In particular, the omnibus would advance all research and development programs and initiatives of interest to universities, National Laboratories, and the broader research community, including energy storage, industrial decarbonization, carbon dioxide removal, and emerging technology areas such as quantum information science, artificial intelligence/machine learning, and microelectronics.

The top three funding priorities include:

- Clean energy programs, including renewables, nuclear, fossil, energy efficiency, and demonstration activities, to address climate change and accelerate deployment of energy technologies to maintain U.S. competitiveness, with an increase of \$698 million, or 12 percent, above the FY 2021 enacted level;
- The National Nuclear Security Administration's (NNSA) nuclear weapons modernization and science-based stockpile stewardship activities, with an increase of \$924 million, or 5 percent, above the FY 2021 enacted level; and
- Fundamental research in the physical sciences, construction of world-class science facilities, and investments in emerging technology areas supported by the Office of Science, with an increase of \$449 million, or 6 percent, above the FY 2021 enacted level.

The omnibus prioritizes and increases investments in six cross-cutting science and technology areas (see graphic below). Congressional guidance only sets minimum spending limits, which would allow DOE to spend more in each of those areas.

Congressional FY 2022 Priority Research Investments (\$ in millions)



*Industrial decarbonization is a new program area in FY 2022 and the first year of appropriations specifically for this program.

Below is a summary of funding levels for relevant programs highlighted in the omnibus:

- The bill will provide \$130 million, an increase of \$14 million above FY 2021 enacted levels, for **Energy Frontier Research Centers (EFRCs)**. This level of funding will support up to 50 new or renewed EFRCs currently being competed.
- The four **Bioenergy Research Centers** will be fully funded at \$100 million.
- The three existing **Energy Innovation Hubs**—Batteries and Energy Storage, Fuels from Sunlight, and Energy-Water Desalination— will be fully funded.
- **Mathematical, computational, and computer science research** will be funded at \$260 million, an increase of \$10 million above FY 2021 enacted levels, and \$15 million is provided for the **Computational Science Graduate Fellowship program**, an increase of \$5 million above the FY 2021 enacted level.
- The bill would provide at least \$245 million for **Quantum Information Science** within the Office of Science, including \$120 million to support core research activities across all six Office of Science programs and \$125 million to fully fund the five **National Quantum Information Science Research Centers**. New investments will support a quantum internet and communications research program consistent with the Department’s “America’s Blueprint for the Quantum Internet.”
- The bill does not provide specific funding for **Urban Integrated Field Labs** to improve climate observational and prediction capabilities, but DOE can move forward with the funding solicitation.
- The **Advanced Research Projects Agency-Energy (ARPA-E)** would see an increase from FY 2021 of \$23 million for a total of \$450 million. Congress rejected the creation of a new **Advanced Research Projects Agency-Climate (ARPA-C)**, but the omnibus directs ARPA-E to explore and potentially fund projects and activities that were proposed for ARPA-C.

- For **applied energy**, the omnibus would increase funding for all renewable energy, energy efficiency, nuclear energy, fossil energy and carbon management, grid modernization, and cybersecurity programs. Consistent with DOE’s priorities, the bill would expand research, development, and demonstration efforts in hydrogen, carbon capture, utilization, and sequestration, and integrated energy storage systems that leverage renewable, energy storage, nuclear, and fossil energy applications and infrastructure.
- The omnibus provides \$20 million to the new **Office of Clean Energy Demonstrations** for project management and other administrative needs to help execute \$21.5 billion in projects from the bipartisan infrastructure bill.
- The omnibus will provide \$104 million for **carbon dioxide removal technologies**, with at least \$75 million for direct air capture.
- The omnibus provides at least \$50 million to support the **Nuclear Energy University Program (NEUP)**. The omnibus creates a separate funding line for NEUP to increase transparency and visibility. The omnibus also directs DOE to develop a detailed spending and execution plan for NEUP activities as well as proposals to address concerns and implement recommendations to the program from the Nuclear Engineering Department Heads Organization. The omnibus also provides no funding to start construction of new university-based nuclear reactors.
- The omnibus does not provide any guidance on **Clean Energy Manufacturing Innovation Institutes**.
- The omnibus provides \$5 million to the Office of Technology Transitions (OTT) to compete new **regional “incubators supporting energy innovation clusters.”** These incubators should have state, regional, and local support; focus on job creation; and expand workforce development opportunities especially in low-income communities and for under-represented energy entrepreneurs.
- The omnibus supports growing **collaborations between DOE and NIH** and provides \$2 million, an increase of \$1 million above FY 2021 enacted levels, to help NIH with data and computational needs.
- NNSA’s renamed **Stockpile Research and Engineering** (formerly Research, Development, Test and Evaluation) program sees an increase of \$29 million, or 1 percent above the FY 2021 enacted level. This includes \$112 million for **Academic Programs**, an increase of \$10 million or 10 percent compared to FY 2021, with \$40 million for Minority Serving Institutions, which is an increase of \$5 million above FY 2021 enacted levels.
- The omnibus provides \$5 million a year over five years for a new **University Consortia for Nuclear Non-proliferation Research Centers** as well as fully funding the three existing centers.

Department of Energy

(In thousands of \$)

	FY 2021 Enacted	FY 2022 Request	FY 2022 House	FY 2022 Senate	FY 2022 Omnibus	Omnibus vs. FY 2021 Enacted
DOE, total	39,625,025	46,646,300	45,126,500	44,985,791	44,855,624*	5,230,599 (13.2%)
Science	7,026,000	7,440,000	7,320,000	7,490,000	7,475,000	449,000 (6.4%)
Advanced Scientific Computing Research	1,015,000	1,040,000	1,025,000	1,040,000	1,035,000	20,000 (2.0%)
Basic Energy Sciences	2,245,000	2,300,000	2,293,000	2,323,000	2,308,000	63,000 (2.8%)

Biological and Environmental Research	735,000	828,000	805,000	828,000	810,000	62,000 (10.2%)
Fusion Energy Sciences	672,000	675,000	698,000	660,000	713,000	41,000 (6.1%)
High Energy Physics	1,029,065	1,061,000	1,078,000	1,079,000	1,078,000	48,935 (4.8%)
Nuclear Physics	635,000	720,000	665,000	744,000	728,000	93,000 (14.6%)
Isotope R&D and Production†	78,000	90,000	82,000	90,000	82,000	4,000 (5.1%)
Accelerator R&D and Production†	16,935	24,000	18,000	24,000	18,000	1,065 (6.3%)
Workforce Development for Teachers and Scientists	29,000	35,000	35,000	35,000	35,000	6,000 (20.7%)
Science Laboratories Infrastructure	240,000	295,000	249,000	295,000	291,000	51,000 (21.3%)
ARPA-E	427,000	500,000	600,000	500,000	450,000	23,000 (5.4%)
ARPA-C‡	--	200,000	--	--	--	--
Office of Clean Energy Demonstrations‡	--	400,000	200,000	100,000	20,000	20,000 (N/A)
EERE	2,861,760	4,732,000	3,768,000	3,896,971	3,200,000	338,240 (11.8%)
Hydrogen and Fuel Cell Technologies	150,000	197,500	195,000	200,000	157,000	7,500 (4.7%)
Bioenergy Technologies	255,000	340,000	303,000	284,500	262,000	7,000 (5%)
Solar Energy Technologies	280,000	386,575	350,000	300,000	290,000	10,000 (3.6%)
Wind Energy Technologies	110,000	204,870	170,000	204,870	114,000	4,000 (3.6%)
Geothermal Technologies	106,000	163,760	137,000	130,380	109,500	3,500 (3.3%)
Water Power Technologies	150,000	196,560	175,000	196,560	162,000	12,000 (8.0%)
Vehicle Technologies	400,000	595,000	530,000	553,114	420,000	20,000 (5.0%)
Building Technologies	290,000	382,000	350,000	382,000	307,500	17,500 (6.0%)
Advanced Manufacturing Technologies	396,000	550,500	500,000	560,500	416,000	20,000 (5.1%)
Electricity	211,720	327,000	267,000	303,000	277,000	65,280 (30.8%)
Cybersecurity, Energy, Security, and Emergency	156,000	201,000	177,000	177,000	185,804	29,804 (19.1%)

Response						
Nuclear Energy	1,507,000	1,850,5000	1,675,000	1,590,800	1,654,800	147,200 (9.8%)
Fossil Energy and Carbon Management R&D§	750,000	890,000	820,000	850,000	825,000	75,000 (10%)
National Nuclear Security Administration	19,732,200	19,743,000	20,155,000	20,041,800	20,656,000	923,800 (4.7%)
Weapons Activities	15,345,000	15,484,295	15,484,295	15,484,295	15,920,000	575,000 (3.7%)
Defense Nuclear Non-proliferation	2,260,000	1,934,000	2,340,000	2,264,000	2,354,000	94,000 (4.2%)

*Total funding includes \$103 million in Congressionally Directed Spending projects distributed across four programs: EERE, FECM, CESER, and OE.

†Isotope R&D and Production and Accelerator R&D and Production are not new research efforts, but starting in FY 2022 they will be separate programs with their own funding lines.

‡ARPA-C and the Office of Clean Energy Demonstrations were new offices proposed in the FY 2022 President's budget request.

§The Office of Fossil Energy has been renamed to reflect its expanded mission.

Source:

- The joint explanatory statement is available at <https://docs.house.gov/billsthisweek/20220307/BILLS-117RCP35-JES-DIVISION-D.pdf>.

Department of Health and Human Services



Department of Health and Human Services

National Institutes of Health

National Institutes of Health



The omnibus would provide a total of \$45 billion for the National Institutes of Health (NIH) in FY 2022, an increase of \$2.03 billion, or 4.7 percent, over the FY 2021 enacted level. Although \$45 billion is lower than the funding levels proposed in the Biden Administration's budget request and the House and Senate bills, this marks the seventh consecutive funding increase for NIH and reflects strong bipartisan support for the agency.

The omnibus would establish the Biden Administration's signature biomedical research initiative, the Advanced Research Projects Agency for Health (ARPA-H), and would provide \$1 billion in funding for the new agency through FY 2024. The Secretary of the Department of Health and Human Services (HHS) has the authority to transfer ARPA-H to any agency or office within HHS within 30 days following the enactment of the omnibus. Establishing ARPA-H within HHS with transfer authority allows the executive branch to make the final decision on whether ARPA-H should be under the jurisdiction of HHS or NIH. The House and Senate are each currently working on ARPA-H authorizing legislation and have differing views on where to house the new agency.

Within the total appropriation, the omnibus would provide \$496 million for specific initiatives in the NIH Innovation Account authorized in the *21st Century Cures Act* (Cures; P.L. 115-255), consistent with spending levels enacted in the legislation. This includes \$194 million for the Cancer Moonshot, \$541 million for the All of Us precision medicine initiative (\$150 million of this amount from Cures), and \$620 million for the BRAIN Initiative (\$152 million of this amount from Cures).

The omnibus would provide an increase of \$289 million for Alzheimer's Disease and Related Dementias (ADRD) research, bringing the total investment in ADRD at the NIH to \$3.4 billion. The omnibus would provide \$345.3 million for research related to opioid addiction, non-addictive opioid alternatives, pain management, and addiction treatment at the National Institute on Drug Abuse (NIDA) and \$270.3 million at the National Institute of Neurological Disorders and Stroke (NINDS) as part of NIH's ongoing Helping to End Addiction Long-term (HEAL) Initiative.

Of note, the FY 2022 omnibus would provide \$70 million for biomedical research facilities grants to expand, remodel, or renovate research infrastructure (awarded using NIH's C06 grant mechanism), a \$20 million increase over FY 2021 levels.

Within the National Institute of General Medical Sciences (NIGMS), the omnibus would provide \$410.5 million for the research capacity building Institutional Development Awards (IDeA) program, an increase of \$13.4 million over FY 2021 enacted levels. In addition, the omnibus would provide an increase of \$6.4 million for NIGMS programs designed to increase diversity in biomedical research, including the

Maximizing Opportunities for Scientific and Academic Independent Careers (MOSAIC), Minority Access to Research Careers (MARC), and Bridges to the Baccalaureate programs, among others.

The omnibus would provide an increase of \$19.8 million to the National Center for Advancing Translational Sciences (NCATS) Clinical and Translational Science Awards (CTSA) program, bringing total funding for the program to \$606.6 million in FY 2022. In the accompanying report language, the Committee acknowledges concern over the recently published CTSA funding opportunity announcement (FOA) that “could alter the strategic direction and divert appropriated resources intended for CTSA hubs.” The report directs NIH to ensure that any hub that successfully recompetes through the new FOA does not receive more than a five percent reduction in total annual support.

Within the National Institute of Allergy and Infectious Diseases (NIAID), the omnibus would provide \$245 million, an increase of \$25 million over FY 2021 enacted levels, for research to develop a universal influenza vaccine. The omnibus also includes \$540 million, an increase of \$15 million, to support research to combat antimicrobial resistance (AMR) and training for new investigators to support AMR research capacity.

Many of the Biden Administration’s research priorities for NIH were included in the omnibus, although with more modest funding levels than proposed in the earlier House and Senate bills. These include \$12.5 million for firearm injury prevention research; \$43.4 million for research on maternal health through the Implementing a Maternal Health and Pregnancy Outcomes Vision for Everyone (IMPROVE) Initiative; and \$50 million for health disparities research at National Institute on Minority Health and Health Disparities (NIMHD). The omnibus also includes \$20 million for the Community Engagement Alliance Against COVID-19 Disparities (CEAL) program to continue working with the underrepresented communities hit hardest by the COVID-19 pandemic and \$20 million for the National Institute of Mental Health (NIMH) to research the impact of the COVID-19 pandemic on mental health.

Of note, the omnibus does not include funding for NIH’s nascent climate change and human health initiative, despite earlier House and Senate bills that would have provided \$110 million for this initiative in FY 2022. Despite a lack of dedicated funding for the program, it is likely that NIH will continue to advance research on the human health impacts of climate change through other mechanisms, albeit with a reduced scope.

The omnibus also emphasizes the importance of diversity in the biomedical research workforce. It would provide \$16.2 million to the Office of the Chief Officer for Scientific Workforce Diversity, an increase of \$10 million over FY 2021 levels, to continue to lead efforts to combat racism and improve diversity in the biomedical research workforce. The report language accompanying the bill also emphasizes the need to improve diversity in research cohorts and clinical trials and encourages NIH to continue to work across the agency to prioritize biomedical research participation of individuals from underrepresented groups.

In efforts to continue to combat sexual harassment in biomedical research, the omnibus includes a provision for the Director of the NIH to require research institutions that receive funds from NIH to notify the NIH Director when key personnel on an award are removed from their position or disciplined due to hostile working conditions including harassment. This provision would provide NIH the needed authority from Congress to require reporting from research institutions versus relying on voluntary reporting as has been done in the past.

Of note, the omnibus would retain the investigator salary cap at Executive Level II (\$199,300) and once again includes legislative language prohibiting the Administration or HHS from making any changes to facilities and administrative (F&A) cost policies.

National Institutes of Health
(in thousands of \$)

	FY 2021 Enacted	FY 2022 Request	FY 2022 House	FY 2022 Senate	FY 2022 Omnibus	Omnibus vs. FY 2021 Enacted
NIH, Total	42,934,000	51,732,713	49,434,000	47,922,891	44,959,000	2,025,000 (4.7%)
National Cancer Institute (NCI)	6,559,852	6,733,302	6,992,056	6,772,469	6,912,522	352,670 (5.4%)
National Heart, Lung, and Blood Institute (NHLBI)	3,664,811	3,845,681	3,866,828	3,841,998	3,808,494	143,683 (3.9%)
National Institute of Dental and Craniofacial Research (NIDCR)	484,867	516,197	519,010	515,720	501,231	16,364 (3.34%)
National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)	2,281,975	2,219,298	2,237,625	2,367,136	2,353,926	71,951 (3.2%)
National Institute of Neurological Disorders and Stroke (NINDS)	2,513,393	2,783,300	2,799,515	2,786,096	2,611,370	97,977 (3.9%)
National Institute of Allergy and Infectious Diseases (NIAID)	6,069,619	6,245,926	6,557,803	6,342,756	6,322,728	253,109 (4.2%)
National Institute of General Medical Sciences (NIGMS)	2,991,417	3,096,103	3,139,656	3,067,557	3,092,373	100,956 (3.4%)
Eunice Kennedy Shriver National Institute of Child Health and Human	1,590,337	1,942,117	1,689,786	1,678,970	1,683,009	92,672 (5.8%)

Development (NICHD)						
National Eye Institute (NEI)	835,714	858,535	877,129	857,868	863,918	28,204 (3.4%)
National Institute of Environmental Health Sciences (NIEHS)	814,675	937,107	941,799	936,271	842,169	27,494 (3.4%)
National Institute on Aging (NIA)	3,899,227	4,035,591	4,258,049	4,180,838	4,219,936	320,709 (8.2%)
National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS)	634,292	680,186	679,410	675,106	655,699	21,407 (3.4%)
National Institute on Deafness and Other Communications Disorders (NIDCD)	498,076	511,792	522,758	511,280	514,885	16,809 (3.3%)
National Institute of Mental Health (NIMH)	2,103,708	2,213,574	2,223,085	2,218,900	2,216,976	113,268 (5.4%)
National Institute on Drug Abuse (NIDA)	1,479,660	1,852,503	1,860,329	1,832,906	1,595,474	115,814 (7.8%)
National Institute on Alcohol Abuse and Alcoholism (NIAAA)	554,923	570,165	582,422	569,633	573,651	18,728 (3.4%)
National Institute on Nursing Research (NINR)	174,957	199,755	200,782	199,595	180,862	5,905 (3.4%)
National Human Genome Research Institute (NHGRI)	615,780	632,973	646,295	634,598	639,062	23,282 (3.8%)
National Institute of Biomedical Imaging and	410,728	422,039	431,081	421,617	424,590	13,862 (3.4%)

Bioengineering (NIBIB)						
National Institute on Minority Health and Health Disparities (NIMHD)	390,865	652,244	661,879	651,101	459,056	68,191 (17.4%)
National Center for Complementary and Integrative Health (NCCIH)	154,162	184,323	185,295	184,249	159,365	5,203 (3.3%)
National Center for Advancing Translational Sciences (NCATS)	855,421	878,957	897,812	878,072	882,265	26,844 (3.1%)
John E. Fogarty International Center (FIC)	84,044	96,322	96,842	96,268	86,880	2,836 (3.4%)
National Library of Medicine (NLM)	463,787	474,864	486,769	476,074	479,439	15,652 (3.4%)
Office of the Director (OD)	2,411,110	2,237,259	2,667,385	2,538,213	2,616,520	205,410 (8.5%)
Common Fund	635,939	645,939	657,112	651,202	657,401	21,462 (3.4%)
Building & Facilities	450,000	250,000	250,000	275,000	250,000	200,000 (-44.4%)
Advanced Research Projects Agency for Health (ARPA-H)	--	6,500,000	3,000,000	2,400,000	1,000,000*	---

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

Sources:

- Bill text: <https://rules.house.gov/sites/democrats.rules.house.gov/files/BILLS-117HR2471SA-RCP-117-35.pdf>
- Joint Explanatory Statement of Division H, DEPARTMENTS OF LABOR, HEALTH AND HUMAN SERVICES, AND EDUCATION, AND RELATED AGENCIES at https://docs.house.gov/billsthisweek/20220307/BILLS-117RCP35-JES-DIVISION-H_Part1.pdf and https://docs.house.gov/billsthisweek/20220307/BILLS-117RCP35-JES-DIVISION-H_Part2.pdf.

Other Agencies Within HHS



The **Department of Health and Human Services (HHS)** would receive \$108.3 billion in FY 2022, an increase of \$11.3 billion over the FY 2021 enacted level. The final bill would provide increases to several programs within HHS of importance to academic communities, including a \$2.25 billion increase for the National Institutes of Health (NIH) and \$1 billion in funding for the Advanced Research Projects Agency for Health (ARPA-H). The bill would provide a 5.9 percent increase in funding for Title VII Health Professions programs and a 6.1 percent increase for Title VIII Nursing Workforce Development training programs at the Health Resources and Services Administration (HRSA). The omnibus would also provide increased funding for programs to improve maternal and child health; address social determinants of health; alleviate mental health and substance use disorders; research injury prevention and control, including firearm mortality; and accelerate medical product development and safety. In addition to setting federal funding levels, the omnibus would allow Medicare to continue to cover audio-only telehealth services, allow Federally Qualified Health Centers (FQHCs) and Rural Health Clinics (RHCs) to continue to offer telehealth services, and would waive the requirement that mental health patients meet a provider in person before receiving care virtually.

The omnibus would fund the **Centers for Disease Control and Prevention (CDC)** at \$8.46 billion for FY 2022, an increase of \$582 million or 7.4 percent over FY 2021. This would include \$7.5 billion in discretionary funding and just over \$900 million from the Prevention and Public Health Fund. In total, the bill would provide:

- \$868 million for immunization and respiratory diseases, an increase of \$47 million over FY 2021.
- \$1.35 billion for HIV/AIDS, viral hepatitis, sexually transmitted diseases, and tuberculosis prevention, an increase of \$31 million over FY 2021.
- \$693 million for emerging and zoonotic infectious diseases, an increase of \$45 million over FY 2021.
 - This includes \$128 million for CDC's Antibiotic Resistance Initiative. The bill would direct CDC to award funding to academic medical centers and veterinary schools, including those at minority-serving institutions (MSIs) or those with extension services, for research addressing aspects of antibiotic/antimicrobial resistance (AR/AMR) with a One Health approach.
- \$20.5 million for Lyme Disease and \$54.6 million for vector-borne diseases.
 - The bill would direct CDC to increase support for surveillance and real-time data reporting for Lyme Disease and other tick-borne diseases.
 - The bill would also instruct CDC to invest in prediction of and monitoring for post-treatment Lyme Disease syndrome, among other activities.
- \$1.3 billion for Chronic Disease Prevention and Health Promotion, a \$62 million increase over FY 2021, including \$30.5 million to support the BOLD Public Health Centers of Excellence addressing Alzheimer's Disease and Related Dementias, \$2 million for research and education activities promoting healthy eating habits for students, increased funding for the Social Determinants of Health Accelerators program, and increased funding for the Racial and Ethnic Approaches to Community Health (REACH) program.
- \$652 million for Public Health Scientific Services, including \$100 million for CDC's Data Modernization Initiative and \$61 million for public health workforce programs.
- \$228 million for environmental health programs, an increase of \$5 million over FY 2021.

- \$715 million for Injury Prevention and Control, including \$12.5 million for firearm injury and mortality prevention research.
 - The omnibus directs CDC to expand its comprehensive suicide prevention programs, with a particular focus on vulnerable, high-risk populations and the impacts of access to mental health services on suicide risk.
 - The omnibus also directs CDC to establish a program to develop and implement a national strategy aimed at improving adolescent mental health, particularly culturally competent interventions and prevention.
- \$352 million for the National Institute for Occupational Safety and Health (NIOSH), a \$7 million increase over FY 2021, including an increase for the NIOSH Education and Research Centers program. The omnibus also directs NIOSH to conduct an assessment on the impacts of COVID-19 on the workplace.
- \$647 million for global health programs, an increase of \$54 million.
- \$862 million for public health preparedness and response, an increase of \$20 million.

The **Health Resources and Services Administration (HRSA)** would receive \$8.9 billion, a \$1.4 billion increase above the FY 2021 level. Within HRSA, the Bureau of Health Workforce (BHW) would receive \$1.3 billion, nearly \$80 million over the FY 2021 level. BHW's Title VII Health Professions and Title VIII Nursing Workforce Development Programs would receive a combined total of \$799 million, a \$45 million increase above the FY 2021 level. More specifically, the final bill would provide increased funding amounts for the following Title VII and Title VIII programs:

- \$123 million for the Behavioral Health Workforce Education and Training (BHWET) program, \$11 million over the FY 2021 level;
- \$45 million for the Area Health Education Centers (AHEC), a \$1.7 million increase over the FY 2021 level;
- \$79.6 million for the Advanced Education Nursing Program, \$4 million above the FY 2021 level;
- \$54.4 million for the Nurse Education, Practice, and Retention program, \$8 million above the FY 2021 level;
- \$23.3 million for the Nursing Workforce Diversity program, a \$3.4 million increase over the FY 2021 level;
- \$53 million for the Scholarships for Disadvantaged Students program, a \$1.5 million increase over the FY 2021 level;
- \$45 Million for the Geriatrics Programs, which includes the Geriatrics Workforce Enhancement Program (GWEP) and the Geriatrics Academic Career Award (GACA) program, a \$2.5 million increase above the FY 2021 level;
- \$6 million for the Rural Maternity and Obstetrics Management Strategies, a \$1 million increase over the FY 2021 level; and
- \$121.6 million for the National Health Service Corps, \$1.6 million above the FY 2021 level.

The Nursing Faculty Loan Repayment Program would be flat-funded at \$28.5 million. The agreement would also fund HRSA's Rural Communities Opioid Response Program (RCORP) at \$135 million, a \$25 million increase over the FY 2021 level. In addition, the agreement encourages the HRSA RCORP program to develop interdisciplinary, dual-track fellowships to train psychiatrists in rural addiction psychiatry. The Committee also included \$5 million to establish health centers to increase access and address barriers to cancer screenings for underserved communities; \$125 million to support the Ending the HIV Epidemic Initiative; funding to address the shortage of registered nurses; slight increases in

maternal and child health programs above FY 2021 levels; and further support for the Telehealth Centers of Excellence program. The bill would also provide \$1.75 billion to community health centers, an increase of \$65 million above the FY 2021 level.

The bill would provide \$6.5 billion for the **Substance Abuse and Mental Health Services Administration (SAMHSA)**, an increase of \$300 million over the FY 2021 enacted level. The bill would provide \$2.1 billion in total funding for the Center for Mental Health Services (CMHS), an increase of nearly \$300 million above FY 2021 levels. The bill would provide \$3.9 billion in total funding to the Center for Substance Abuse Treatment (CSAT), an increase of \$100 million over FY 2021 levels, \$218 in total funding to the Center for Substance Abuse Prevention (CSAP), a \$10 million increase above FY 2021 levels. Within SAMHSA, the bill would provide approximately \$1.9 billion for the Substance Abuse and Prevention Treatment Block Grant, \$50 million above FY 2021; \$315 million for the Certified Community Behavioral Health Clinic Expansion Grant Program; and \$1.5 billion for State Opioid Response Grants, \$25 million above the FY 2021 enacted level. The bill would also:

- Provide \$16 million for the Minority Fellowship Program (MFP), equal to FY 2021 levels;
- Provide \$120 million for SAMHSA's Project Advancing Wellness and Resiliency in Education (AWARE) program, which provides grants for improvement of mental health literacy among teachers and other youth-facing professionals. This includes \$12.5 million for grants to high-crime, high-poverty areas to address root causes of civil unrest and community violence and \$7 million to increase student access to evidence-based, culturally relevant trauma support services and mental health care through established partnerships with community organizations;
- Provide \$23.2 million for the National Strategy for Suicide Prevention;
- Provide \$5 million for the Comprehensive Opioid Recovery Centers program;
- Provide \$6 million to hospitals and emergency departments under the Emergency Departments Alternatives to Opioids program; and
- Encourage SAMHSA to support rural communities by standing up initiatives to advance opioid abuse prevention, treatment, and recovery objectives, including by improving access through telehealth.

CMS and Telehealth Flexibilities

The omnibus would provide \$4 billion for administrative expenses at the **Centers for Medicare and Medicaid Services (CMS)**, an increase of \$50 million over the FY 2021 enacted level.

The omnibus would extend telehealth authorities for five months after the expiration of the public health emergency. The bill would also provide additional flexibilities, including allowing Medicare beneficiaries to be able to receive telehealth services from any geographic location, including their home. Under the bill, Medicare would cover audio-only services when appropriate, and the number of eligible practitioners able to provide telehealth services would remain extended to physical therapists, occupational therapists, special therapists, and audiologists.

FQHCs and RHCs would be able to continue providing telehealth services, including mental health services, after the public health emergency. In addition, behavioral health providers would not be required to schedule an in-person visit before conducting a telehealth session.

The omnibus would direct the Medicare Payment Advisory Commission (MedPAC) to conduct a study about telehealth utilization, expenditures, and payment policies in Medicare. The MedPAC study would

also review the impact of the expansion of telehealth during the pandemic on access to care and quality of care.

The omnibus would also protect certain 340B hospitals that lost their eligibility due to a drop in their disproportionate share hospitals (DSH) adjustment percentage below the required threshold for 340B eligibility due to the pandemic.

Several additional offices, agencies, and programs would also receive increases. Though funded through a separate appropriations bill, the **Food and Drug Administration (FDA)** would receive \$3.3 billion in discretionary funding, an increase of \$102 million over the FY 2021 enacted level. The omnibus would provide \$6.2 billion in total funding to FDA, which includes funding from user fees that the agency negotiates with medical product manufacturers. The current user fee programs expire at the end of FY 2022 and must be reauthorized. The bill would allow FDA to better respond to contaminated food outbreaks and address other current issues such as heavy metals in baby food. The agreement would also increase and strengthen in-person inspections of foreign drug manufacturers. The bill would also provide FDA with \$29 million for medical product safety; \$29.5 million food safety activities; \$41.3 million for cross-cutting initiatives that support both medical and food safety; \$29 million to address the opioid crisis; and \$50 million to accelerate medical product development as authorized in the *21st Century Cures Act*.

The omnibus would provide \$350.4 million to the **Agency for Healthcare Research and Quality (AHRQ)**, an increase of \$12.4 million or 3.7 percent over FY 2021 levels. This would include \$2 million to establish a Center for Primary Care Research within AHRQ and an \$8 million increase to research diagnostic errors and impacts on patient safety. The bill would additionally direct AHRQ to increase research efforts on heart disease, organ availability and donation, and antimicrobial resistance. The **Office of the National Coordinator for Health IT (ONC)** would be funded at \$64 million, a \$2 million increase above the FY 2021 level. The Committee notes that the increase is to “support interoperability and information sharing efforts related to the implementation of Fast Healthcare Interoperability (FHIR) standards or associated implementation standards.” The **Office of Minority Health (OMH)** would be funded at nearly \$65 million, a \$3 million increase above the FY 2021 level. The Committee would provide \$1 million to the Center for Indigenous Innovation and Health Equity and urge HHS to partner with universities focusing on Indigenous health research and policy among Native Americans, Alaska Natives, and Native Hawaiians/Pacific Islanders. Furthermore, the Committee supports the OMH National Lupus Outreach and Clinical Trial Education program with the goal to increase minority participation in lupus clinical trials. The Committee encourages OMH to continue to develop public-private partnerships with organization representing lupus patients to increase participation in clinical trials for all minority populations.

The omnibus would provide \$745 million for the **Biomedical Advanced Research and Development Authority (BARDA)**, a significant increase of \$148.3 million or nearly 25 percent over FY 2021 levels. This would include \$25 million for the Combating Antibiotic Resistant Bacteria Biopharmaceutical Accelerator and related research and development on antimicrobial resistance (AMR), including next generation therapeutics. The agreement would further encourage investment from BARDA for infectious disease, pandemic influenza, AMR, and domestic manufacturing of key biological starting materials needed for rapid pharmaceutical development to address future pandemics and biothreats.

Department of Health and Human Services (Other)

(In millions of \$)

	FY 2021 Enacted	FY 2022 Request	FY 2022 House	FY 2022 Senate	FY 2022 Omnibus	Omnibus vs. FY 2021 Enacted
Health Resources and Services Administration (HRSA)	7,484	7,813	8,724	9,185	8,892	1,408 (18.8%)
Title VII	490	577	665	604	519	29 (5.9%)
Title VIII	264	268	314	281	280	16 (6.1%)
Substance Abuse and Mental Health Services Administration (SAMHSA)	6,016	9,734	9,160	9,103	6,546	530 (8.8%)
Mental Health Services	1,792	2,937	3,161	2,971	2,081	289 (16.1%)
Substance Abuse Treatment	3,855	6,409	5,512	5,651	3,955	100 (2.6%)
Substance Abuse Prevention	208	217	244	246	218	10 (4.8%)
Agency for Healthcare Research and Quality (AHRQ)	338	380	380	380	350	12 (3.6%)
Centers for Disease Control and Prevention (CDC)	7,875	9,553	10,571	9,734	8,457	582 (7.4%)
Chronic Disease Prevention and Health Promotion	1,277	1,453	1,453	1,510	1,339	62 (4.9%)
National Institute for Occupational Safety and Health (NIOSH)	345	345	345	347	352	7 (2.0%)
Environmental Health	223	333	333	333	228	5 (2.2%)
Administration on Community Living (ACL)	2,286	2,954	3,132	2,856	2,346	60 (2.6%)
National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR)	113	119	119	119	116	3 (2.7%)
Administration for Children and Families (ACF)	41,490	46,943	46,943	48,616	48,715	7,225 (17.4%)
Office of the National Coordinator for Health IT (ONC)	62	87	87	87	64	2 (3.2%)

Biomedical Advanced Research and Development Authority (BARDA)	597	823	823	823	745	148 (24.8%)
Food and Drug Administration (FDA), Direct Appropriation	3,202	3,527	3,450	3,399	3,304	102 (3.2%)

*Total funding includes approximately \$1.2 billion in Congressionally Directed Spending projects across four HHS agencies: ACF, ACL, HRSA, and SAMHSA.

Sources:

- Joint Explanatory Statement of Division H, DEPARTMENTS OF LABOR, HEALTH AND HUMAN SERVICES, AND EDUCATION, AND RELATED AGENCIES at https://docs.house.gov/billsthisweek/20220307/BILLS-117RCP35-JES-DIVISION-H_Part1.pdf and https://docs.house.gov/billsthisweek/20220307/BILLS-117RCP35-JES-DIVISION-H_Part2.pdf.



Department of Homeland Security

The Department of Homeland Security (DHS) would receive \$81.1 billion in discretionary funding in the fiscal year (FY) 2022 omnibus bill. This figure represents a \$3.4 billion increase over the President's budget request and \$6.7 billion above the FY 2021 enacted level. DHS's appropriations measure is usually one of the most contentious annual spending bills and the final text reflects considerable compromises between parties on immigration and other issues. Of note, the final bill would provide robust support for DHS's research and cybersecurity priorities.

Within the Department's Science and Technology Directorate (S&T), the omnibus would provide \$886.4 million, which is \$120.8 million above the FY 2021 enacted level and \$63.5 million above the budget request. The package would also provide \$65.5 million in funding for the Office of University Programs (OUP), representing a \$21 million or 47 percent increase above the FY 2021 enacted level and a \$14.5 million increase over the budget request. Of this amount, \$57.8 million would support the DHS Centers of Excellence program with \$12 million specifically designated to assess the current state of border security. This is similar to language included in the Senate Appropriations bill, which recommended the assessment to "encompass all relevant investments (personnel, technology, infrastructure, etc.) and identify how those investments translate into operational capabilities, including quantifying the change in capabilities. Further, this work shall inform the development and delivery of reusable decision support tools and capabilities to continue ongoing assessments of the impacts of border security-related investments, providing DHS and U.S. Customs and Border Protection the ability to identify any projected performance gains as a result of future investments." The package would also provide nearly \$7.7 million for programs at OUP to support Minority Serving Institutions (MSI).

The bill added the following research and development (R&D) priorities for S&T to consider in addition to the ongoing meritorious projects included in the House Appropriations bill. Topics that appear in both the House and Senate appropriations bills are *italicized*.

- *\$15.3 million for the Detection Canine Program, of which \$10 million shall be in collaboration with end users;*
- *\$10 million for container demonstration and scalable container design improvements*
- *\$9 million for Unmanned Aerial Systems (UAS) research, \$4 million of which shall be used for on-site testing and evaluation;*
- \$5 million for Customs and Border Protection and Transportation Security Administration detection and interdiction;
- *\$5 million for entering into an Educational Partnership Agreement to develop capabilities for maintaining and improving the integrity of U.S. levee and dam system;*
- \$4.5 million for collaboration with Immigration and Customs Enforcement Homeland Security Investigations on the development of opioid-related investigation and analytic capabilities;

- \$4 million to enter into partnership intermediary agreements managed by the S&T Office of Industry Partnerships, as authorized under Title 15 U.S.C. §3715;
- \$2 million to support thermoplastic composite materials that improve sensor integration; and
- \$1.5 million to continue the maritime port security and resiliency testbed.

With this bill, the DHS components are reminded that while they may have received customized applied research funding within each of their accounts, S&T shall remain “the central component for departmental R&D.”

Other provisions prescriptive to the broader DHS include:

- \$3 million for Cybersecurity and Infrastructure Security Agency (CISA) to collaborate with the Army Engineer Research Development Center and other national labs and universities to identify needs and requirements for public gathering security. Notably, the FY 2022 omnibus directs responsibility for this program to the CISA, whereas the Senate version recommended S&T be the lead for this program;
- \$12 million for Continuing Training Grants, of which \$2 million should be for the Federal Emergency Management Agency (FEMA) to partner with the Federal Aviation Administration Unmanned Aircraft Center of Excellence to conduct regional training for State Local Tribal and Territorial (SLTT) responders using UAS in disaster response exercises; and
- \$740 million in federal assistance for the Urban Area Security Initiative, representing a \$50.3 million increase over the President’s budget request.

FY 2022 Homeland Security Appropriations *(In thousands)*

	FY 2021 Enacted	FY 2022 Request	FY 2022 House	FY 2022 Senate	FY 2022 Omnibus	Omnibus vs. FY 21 Enacted
DHS, total*	74,460,40	77,722,51	78,316,09	78,135,68	81,127,95	6,667,555 (8.95%)
Science and Technology Directorate	765,558	822,903	830,403	868,903	886,403	120,845 (15.8%)
University Programs	44,511	51,037	53,537	63,037	65,537	21,026 (47.24%)

**Totals for Discretionary Appropriations reflected*

Sources:

- A summary of the Homeland Security appropriations bill can be found at <https://www.appropriations.senate.gov/imo/media/doc/Homeland.pdf>.
- The Joint explanatory statement of Division F, DEPARTMENT OF HOMELAND SECURITY is available at <https://docs.house.gov/billsthisweek/20220307/BILLS-117RCP35-JES-DIVISION-F.pdf>

Department of Justice



Department of Justice

The U.S. Department of Justice (DOJ) would receive approximately \$35.2 billion in FY 2022, which would be an increase of nearly \$1.4 billion above the FY 2021 enacted level but \$806.4 million below the president's budget request. Key research accounts at DOJ would also receive sharp cuts under the agreement, as Congress targeted steep funding increases for other priority accounts. For example, the National Institute of Justice (NIJ), DOJ's primary external research program that leverages university partnerships with the goal of strengthening science and enhancing justice, would receive \$30 million in FY 2022, \$7 million below the FY 2021 enacted level. This is especially surprising, as the individual House and Senate bills called for increased funding for this account by \$8 million and \$4 million, respectively. This would be the lowest funding amount for NIJ in several years.

The bill sets aside funding for several specific topics within the NIJ budget, including: \$1 million for research on school violence; \$5 million for research on programs under the *First Step Act*, the major prison reform and recidivism reduction bill from 2018; \$6 million for research on domestic radicalization; up to \$500,000 for a clearinghouse on online extremism; \$1.5 million for a feasibility study to track abuse in youth serving organizations; up to \$5 million for the continued development and testing of DOJ's campus climate survey on sexual harassment and assault; and up to \$500,000 for microgrants to support restorative justice. Other research priorities outlined by the omnibus without specific monetary amounts include re-releasing the *Research and Evaluation on a National Model for Technical Violations* solicitation; studies on "non-carceral, nonpunitive approaches to addressing and reducing community violence;" the continuation of the National Survey of Children Exposed to Violence; research and technical assistance on DOJ's efforts related to missing and exploited children; and understanding the effects of human trafficking.

Again, it's clear that funding for research accounts and other programs would be diverted to provide large increases to other priorities, some of which could support partnerships with universities and research organizations. For instance, the Community Oriented Policing Services (COPS) Office would receive a \$125.7 million increase over FY 2021 for grant programs related to police-community relations. Some COPS programs support partnerships between law enforcement agencies and research organizations to develop best practices for community policing, which has been identified as a key priority for the Biden Administration. DOJ would also receive an increase of \$31 million over FY 2021 for grant programs to help communities and state and local law enforcement "respond to substance abuse, including opioids, stimulants, and synthetic drugs." Again, this could include partnerships between state and local governments with law enforcement, community groups, and public health professionals at universities.

The bill would again provide support for the re-establishment of the DOJ Science Advisory Board, which worked to provide extra-agency review of, and recommendations for, the department's research, statistics, and grants programs.

Department of Justice

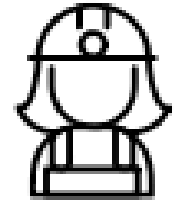
(in thousands of \$)

	FY 2021 Enacted	FY 2022 Request	FY 2022 House	FY 2022 Senate	FY 2022 Omnibus	Omnibus vs. FY 21 Enacted
DOJ, total	33,789,875	36,013,554	36,435,213	36,229,795	35,207,110	1,417,235 (4.2%)
Research, Evaluation, and Statistics	82,000	86,000	95,000	86,000	70,000	-12,000 (14.6%)
National Institute of Justice	37,000	41,000	45,000	41,000	30,000	-7,000 (18.9%)

Source:

- The joint explanatory statement for Division B, COMMERCE, JUSTICE, SCIENCE, AND RELATED AGENCIES is available at <https://docs.house.gov/billsthisweek/20220307/BILLS-117RCP35-JES-DIVISION-B.pdf>.

Department of Labor



Department of Labor

The Department of Labor (DOL) would receive \$14.4 billion in funding, which is \$249 million more than in FY 2021. The explanatory statement accompanying the omnibus encourages the Department to address advanced robotics manufacturing workforce needs, with an emphasis on reskilling incumbent manufacturing workers. The bill would support increased investments in several programs that support workforce development efforts at institutions of higher education, including

- \$2.9 billion for Workforce Innovation and Opportunity Act (WIOA) State Grants, an increase of \$34 million above the FY 2021 enacted level;
- \$235 million for apprenticeship programs, an increase of \$50 million compared to FY 2021;
- \$50 million for the Strengthening Community College Training Grants (SCCTG) program, an increase of \$5 million compared to FY 2021; and
- \$45 million to be split between the Appalachian Regional Commission, Delta Regional Authority, and the Northern Border Regional Commission, to continue the Workforce Opportunity for Rural Communities grant initiative.

Additionally, the omnibus would fund \$137.6 million in congressionally directed spending under DOL's employment and training activities.

Department of Labor

(in thousands of \$)

	FY 2021 Enacted	FY 2022 Request	FY 2022 House	FY 2022 Senate	FY 2022 Omnibus	Omnibus vs. Enacted
Adult Employment and Training Activities	862,649	899,987	923,174	882,987	870,649	8,000 (0.93%)
Youth Activities	921,130	963,837	988,604	944,837	933,130	12,000 (1.30%)
Dislocated Worker Assistance	1,061,553	1,155,278	1,183,554	1,110,278	1,075,553	14,000 (1.32%)
National Dislocated Workers Grants	280,859	380,859	435,859	315,859	300,859	20,000 (7.12%)
Apprenticeship Program	185,000	285,000	285,000	245,000	235,000	50,000 (27.03%)
Workforce Data Quality Initiative	6,000	6,000	7,250	6,000	6,000	--

National Youth Employment Program	--	50,000	50,000	25,000	--	--
Veterans' Clean Energy Training Program	--	20,000	20,000	10,000	--	--

Sources:

- Text of Consolidated Appropriations Act of 2022 [HOUSE AMENDMENT TO THE SENATE AMENDMENT TO H.R. 2471] <https://docs.house.gov/billsthisweek/20220307/BILLS-117HR2471SA-RCP-117-35.pdf>.
- Joint Explanatory Statement of Division H, DEPARTMENTS OF LABOR, HEALTH AND HUMAN SERVICES, AND EDUCATION, AND RELATED AGENCIES, is available at https://docs.house.gov/billsthisweek/20220307/BILLS-117RCP35-JES-DIVISION-H_Part1.pdf and https://docs.house.gov/billsthisweek/20220307/BILLS-117RCP35-JES-DIVISION-H_Part2.pdf.



Environmental Protection Agency

The omnibus would provide the U.S. Environmental Protection Agency (EPA) with a total of \$9.56 billion, an increase of \$322 million or a 3.49 percent relative to the fiscal year (FY) 2021 enacted level.

Consistent with priorities outlined in the President's budget request and with the House and Senate bills, the omnibus would increase investments to address climate change, promote environmental justice (EJ), and improve air and water quality for communities, though at a significantly reduced scale. While the omnibus and its joint explanatory statement provide guidance, the Committee indicated that unless otherwise noted, the language set forth in House Report 117-83 is adopted.

EPA's **Science and Technology (S&T)** account would receive \$750.17 million, an increase of \$20.85 million or 2.9 percent above the FY 2021 enacted level. Most of the S&T research accounts would receive flat funding or have very slight increases. **The Science to Achieve Results (STAR) Program**, EPA's primary mechanism for funding external research grants, would be funded at a level of \$28.6 million, marking the sixth year in a row that funding for this program has not increased. Under this funding envelope, the Committee directs continued funding for the Children's Environmental Health and Disease Prevention, focusing specifically on early life stage vulnerabilities to environmental stressors. The Committee also directs the EPA to "expand its efforts to identify methods to reduce smoke exposure during wildfire episodes and improve wildfire smoke monitoring and prediction."

In addition to the STAR Program, other areas of interests to the academic community include:

- \$11.4 million for the **National Priorities Program**, of which \$8.5 million would be for extramural research grants on water quality, and \$2.9 million of which would be allocated towards congressionally directed spending requests. This is a rejection of the Administration's proposal to eliminate this program and nearly \$4 million more than enacted in FY 2021.
- \$4 million for **Enhanced Aquifer Use and Recharge** research, which would be distributed to research centers, including those from universities, Tribes, and water related institutions working in collaboration with the U.S. Geological Survey (USGS).
- \$2.5 million for intramural research related to **coronavirus and health outcomes**, which should focus on any linkages between exposure to pollution and increased risk for adverse outcomes from communicable respiratory diseases.
- Increased funding, primarily through Congressionally directed spending items, for research on **per- and polyfluoroalkyl substances (PFAS)**, focusing on priority actions under the agency's PFAS Action Plan.
- \$100 million for **EJ programs in disadvantaged communities**, an eight-fold increase in funding relative to FY 2021. Although the total funding is reduced relative to levels proposed in the Administration's request and the House bill for FY 2022, EJ is expected to be incorporated across EPA's work beyond these allocated funds based on policy directives from Congress and ongoing Administration guidance. To this end, the Committee directs the agency to develop an EJ spending plan and to provide a briefing on how EJ work will be conducted across the agency 30

days after the enactment of the omnibus. Further, the Committee also requests a comprehensive EJ proposal in the EPA FY 2023 budget request, including further detail about the new office of the National Program Manager for Environmental Justice and Civil Rights, as requested in the FY 2022 budget request.

Environmental Protection Agency
(in thousands of \$)

	FY 2021 Enacted	FY 2022 Request	FY 2022 House	FY 2022 Senate	FY 2022 Omnibus	FY 2022 Omnibus vs. FY 2021 Enacted
EPA, Total	9,237,153	11,233,279	11,344,071	10,541,049	9,559,485	322,332 (3.5%)
Science and Technology	729,329	829,972	807,262	803,174	750,174	20,845 (2.9%)
National Priorities Program	7,500	---	8,500	8,500	11,430	3,930 (52.4%)
Science to Achieve Results (STAR) Grants	28,600	--	30,000	28,600	28,600	0
Environmental Justice*	12,664	299,703	247,814	205,841	100,000	87,336 (689.6%)

*Numbers provided in the table for Environmental Justice funding are inclusive of funds proposed through the Environmental Programs and Management account as well as the Hazardous Substance Superfund account.

Source:

- Joint Explanatory Statement of Division G, DEPARTMENTS OF THE INTERIOR, ENVIRONMENT, AND RELATED AGENCIES is available at <https://docs.house.gov/billsthisweek/20220307/BILLS-117RCP35-JES-DIVISION-G.pdf>.

Humanities, Arts, and Cultural Agencies



Humanities, Arts, and Cultural Agencies

The omnibus would provide \$180 million each to the **National Endowment for the Arts (NEA)** and the **National Endowment for the Humanities (NEH)**, an increase of \$12.5 million or 7.5 percent for each agency over FY 2021 levels. At NEA, this increase would include an additional \$5 million for direct grant programs and an additional \$1 million for the Challenge America grant program. At NEH, the increase would include an additional \$500,000 each for preservation and access programs, public programs, research programs, education programs, and digital humanities initiatives, as well as an additional \$600,000 for challenge grants programs such as the Capacity Building and Infrastructure grants. The bill would also direct NEH to support projects focused on the role of women in American history, particularly in fields such as aviation, computing, and other STEM disciplines.

The omnibus would provide the **Institute of Museum and Library Sciences (IMLS)** with \$268 million in FY 2022, an increase of \$11 million or 4.3 percent over FY 2021 levels. This increase would include \$2 million for the establishment of an information literacy taskforce, which would be responsible for developing guidance, creating and disseminating resources and materials, launching a clearinghouse website, and other efforts aimed at improving information literacy. The omnibus would also provide the **Corporation for National and Community Service (CNCS)** with \$1.15 billion, an increase of \$29.5 million or 2.6 percent over FY 2021 levels. The accompanying report would direct CNCS to create a report on necessary steps towards restarting and expanding service-learning opportunities, such as Summer of Service and Semester of Service programs, as well as direct priority for AmeriCorps competitive grants towards organizations supporting individuals seeking recovery from substance use disorders.

The **National Archives and Records Administration (NARA)** would receive \$476.5 million, an increase of \$78.7 million or 19.8 percent over FY 2021 levels. This would include a \$500,000 increase for the National Historical Publications and Records Commission grants programs, for a total of \$7 million in FY 2022. The **Smithsonian Institution** would receive \$1.06 billion, an increase of \$29.5 million or 2.9 percent over FY 2021 levels.

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

	FY 2021 Enacted	FY 2022 Request	FY 2022 House	FY 2022 Senate	FY 2022 Omnibus	Omnibus vs. FY 2021 Enacted
NEH, total	167,500	177,550	201,000	182,500	180,000	12,500 (7.5%)
Research Programs	14,500	15,000	15,000	15,000	15,000	500 (3.4%)

Education Programs	13,000	13,500	13,500	13,500	13,500	500 (3.8%)
Federal/State Partnerships	51,576	54,376	61,836	55,280	54,348	2,772 (5.4%)
NEA, total	167,500	201,000	201,000	182,500	180,000	12,500 (7.5%)
Grants	80,310	98,310	98,310	88,123	86,310	6,000 (7.5%)
State and Regional Partnerships	53,540	65,540	65,540	58,024	57,540	4,000 (7.5%)
IMLS, total	257,000	265,000	282,000	282,000	268,000	11,000 (4.3%)
NARA, total	397,823	426,000	456,000	492,442	476,543	78,720 (19.8%)
National Historical Public Records Commission	6,500	9,500	9,500	7,500	7,000	500 (7.7%)
CNCS, total	1,121,102	1,210,266	1,315,266	1,185,266	1,150,636	29,534 (2.6%)
Smithsonian Institution	1,032,722	1,102,000	1,102,000	1,102,000	1,062,215	29,493 (2.9%)

Sources:

- Text of Consolidated Appropriations Act of 2022 [HOUSE AMENDMENT TO THE SENATE AMENDMENT TO H.R. 2471] <https://docs.house.gov/billsthisweek/20220307/BILLS-117HR2471SA-RCP-117-35.pdf>.
- Joint Explanatory Statement of Division G, DEPARTMENTS OF INTERIOR, ENVIRONMENT, AND RELATED AGENCIES, is available at <https://docs.house.gov/billsthisweek/20220307/BILLS-117RCP35-JES-DIVISION-G.pdf>.
- Joint Explanatory Statement of Division E, FINANCIAL SERVICES AND GENERAL GOVERNMENT APPROPRIATIONS is available at <https://docs.house.gov/billsthisweek/20220307/BILLS-117RCP35-JES-DIVISION-E.pdf>.
- Joint Explanatory Statement of Division H, DEPARTMENTS OF LABOR, HEALTH AND HUMAN SERVICES, AND EDUCATION, AND RELATED AGENCIES, is available at https://docs.house.gov/billsthisweek/20220307/BILLS-117RCP35-JES-DIVISION-H_Part1.pdf and https://docs.house.gov/billsthisweek/20220307/BILLS-117RCP35-JES-DIVISION-H_Part2.pdf.



International Programs—State Department and USAID

The Department of State, Foreign Operations, and Related Programs (SFOPS) bill in the omnibus package would provide a total of \$59.7 billion in funding, including \$58.4 billion in base discretionary spending, which includes funds for the **U.S. Agency for International Development (USAID)** and the **U.S. Department of State (DOS)**. The base discretionary funding level is an increase of \$2.2 billion (3.4 percent) above the fiscal year (FY) 2021 enacted level. The SFOPS bill would also provide an additional **\$5 billion in emergency appropriations**, which includes \$500 million for humanitarian needs and \$4.45 billion for COVID-19 relief through the Global Health Programs. The bill reaffirms Congressional commitment to regain American leadership status and global influence, with an emphasis on increased international engagement to support foreign assistance, especially in countries in need of humanitarian assistance; strengthening of global health systems, pandemic preparedness, and global health security; and actions to combat climate change. The bill also includes several elements aligned with the Biden Administration’s promotion of diversity, equity, and inclusion, including by stipulating an increase in funding, authority, and guidance to equip the Secretary of State and USAID Administrator to increase diversity and inclusion in the nation’s diplomatic and development workforce.

Of interest to the research and higher education community, the bill would provide:

- **\$753 million for educational and cultural exchange programs**, an increase of \$12.7 million (1.7 percent) relative to the FY 2021 enacted level. **The Fulbright program** would be funded at \$275 million, \$1 million above the FY 2021 level. \$2 million within this program is dedicated to expanding “two-way international academic and professional and cultural exchanges for individuals of African descent, including the development of partnerships with Historically Black Colleges and Universities.” It would also provide \$35 million to the **Young Leaders Initiative**, equivalent to the FY 2021 level. In addition, the report includes language directing DOS to explore options for providing in-person exchange opportunities for individuals who were forced to participate virtually during the COVID-19 pandemic.
- **\$9.83 billion for global health programs**, an increase of \$634 million (6.9 percent) above the FY 2021 enacted level, excluding the \$4.45 billion in COVID-19 relief provided as emergency appropriations. This funding envelope includes \$107.5 million for research on neglected tropical diseases, as well as ability to allocate discretionary funds to research and development through programs on malaria, HIV/AIDS, nutrition, maternal and child health, family planning and reproductive health. In addition, the explanatory statement includes language encouraging USAID to support research and development of a vaccine to protect against nerve damage among those diagnosed with leprosy. The bill directs USAID to develop a new multi-year global health research and development strategy.
- \$1.1 billion to support **food security and agriculture development programs**, including \$150 million to support research initiatives in USAID’s Bureau of Resilience and Food Security, which is equivalent to the FY 2021 enacted level. Of this amount, the Committee recommends \$58 million for the Feed the Future (FtF) Innovation Labs, a \$3 million or 5.4 percent increase relative to the FY 2021 level.

The report includes language encouraging a future FtF program on the “use of irrigation and agricultural intensification to support small holder farmers in simple, affordable scalable technology production, financing, and repair,” to be further specified in FY 2023.

- **\$385 million for biodiversity programs**, a \$65 million or 20 percent increase over the FY 2021 enacted level.
- **\$715 million for climate change programs**, including \$185 million for sustainable landscapes, \$270 million for adaptation programs, and \$260 million for clean energy programs, a \$224 million or 45.6 percent increase relative to FY 2021 levels. There are also funds provided for U.S. contributions to the UN Framework Convention on Climate Change and the Intergovernmental Panel on Climate Change, and authorization for several multilateral climate funds.
- The Committee adopts the House report language to support research and cooperation efforts in **non-proliferation, anti-terrorism, and related activities**. The Committee recommends that DOS support international cooperation in science through provision of funding for international scientific and technological facilities that “foster a mutual understanding and tolerance through international cooperation in science, including in the Middle East.” In addition, the Committee instructs the Bureau of Arms Control, Verification, and Compliance to support additional research in multi-actor deterrence.

Selected Programs in Department of State, Foreign Operations, and Related Programs

(In thousands of \$)

	FY 2021 Enacted	FY 2022 Request	FY 2022 House	FY 2022 Senate	FY 2022 Omnibus	FY 2022 Omnibus vs. FY 2021 Enacted
Total	60,933,900	62,513,492	62,242,000	62,889,900	59,707,200*	-1,226,700 (2%)
Education and Cultural Exchange Programs	740,300	741,300	750,000	748,961	753,000	12,700 (1.7%)
Global Health Programs	9,195,950	10,050,950	10,641,450	10,353,950	9,830,000	634,050 (6.9%)
Feed the Future Innovation Labs	55,000	--	58,000	60,000	58,000	3,000 (5.5%)

*The total base discretionary spending, which includes funds for USAID and DOS is \$58.4 billion. This represents an increase of 2.2 billion relative to FY 2021; however, due to accounting differences, this appears as a decrease overall due to the exclusion of an allocation for Overseas Contingency Operations funding, which was included in all other bills.

Source:

- Joint Explanatory Statement of Division K, DEPARTMENT OF STATE, FOREIGN OPERATIONS, AND RELATED PROGRAMS is available at <https://docs.house.gov/billsthisweek/20220307/BILLS-117RCP35-JES-DIVISION-K.pdf>.



National Aeronautics and Space Administration

The National Aeronautics and Space Administration (NASA) would receive \$24.041 billion in FY 2022, an increase of \$770 million or 3.3 percent above the FY 2021 enacted level. However, nearly every major directorate is funded at levels below the FY 2022 President's Budget Request (PBR). In many cases, funding is also lower than the House and Senate marks - a rare occurrence in the last decade when even politically divided congresses have allocated spending at levels above White House proposals.

Rather than the explicit elimination or reduced spending for missions and programs, Congress chose to adjust many of the funding allowances in the House and Senate marks from minimum amounts NASA must spend (i.e., "not less than") to maximum allocations (i.e., "up to" or "no more than"). The latter figures are almost universally in reference to funding proposed in the FY 2022 request or current FY 2021 levels. The effect of this approach is to hand NASA greater authority and flexibility to determine how it maintains ongoing programs and mission development while initiating new activities and priorities in President Biden's first budget request under a less than anticipated funding reality.

The **Science Mission Directorate (SMD)** would receive \$7.6 billion, an increase of \$313.6 million above FY 2021 levels. Although every division within SMD would see increases above current amounts, they would also receive flat or decreased funding relative to the FY 2022 request and the House and Senate marks. The bill provides at least \$30 million for university-led small satellite missions which have grown in popularity and seen rapid adoption by SMD's divisions over the last several years.

SMD's **Earth Science Division (ESD)** will receive \$2.06 billion, an increase of \$64.7 million above FY 2021 levels but well below the \$2.25 billion proposed in the PBR and House mark, and \$2.23 billion allocated in the Senate. Congress instead provided funding "up to" the requested level for Earth Science Research and Analysis; Decadal Survey and Future Missions; Plankton, Aerosol, Cloud, ocean Ecosystem (PACE); Carbon Monitoring System; Earth Venture Class Missions; NASA-ISRO Synthetic Aperture Radar; and the Geostationary Carbon Cycle Observatory (GeoCARB). The bill would provide no less than the requested level for the Climate Absolute Radiance and Refractivity Observatory Pathfinder (CLARREO) and the Geosynchronous Littoral Imaging and Monitoring Radiometer (GLIMR). The FY 2022 outcome represents a potential setback in NASA's attempt to raise the Agency's profile within the Biden Administration's aggressive climate agenda by leveraging ESD's missions and research programs.

The **Astrophysics Division (APD)** will receive \$1.39 billion, a \$37.3 million increase above FY 2021 and slightly less (\$6.7 million) below the request. The Roman Space Telescope would be fully funded at the request level of \$501.6 million. The November 2021 release of the 2020 Astrophysics and Astronomy Decadal Survey (Astro2020) prevented the House and Senate from funding the Survey's recommendations. The omnibus accordingly does not fund Astro2020 priorities but does acknowledge its release and requires NASA to include technology maturation funding in the FY 2023 request in

support of the next “Great Observatory” space telescope – the Survey’s top recommended mission. The agreement also extends a lifeline to SOFIA despite NASA’s ongoing effort to terminate the mission and the Decadal’s endorsement of those efforts. APD’s Research and Analysis and Explorer’s programs will receive \$279.1 million and \$277.7 million, respectively.

The **Planetary Science Division** will receive \$3.12 billion in FY 2022 – the largest dollar increase (\$420.4 million) for any division within SMD and – especially noteworthy – in comparison to any other directorate. The bill would maintain funding for major PSD programs up to NASA’s requested amounts, including planetary defense missions under development, the Lunar Discovery and Exploration and Commercial Lunar Payload Services programs, New Frontiers and Discovery competitive mission lines, and the Mars Sample Return mission.

The **Heliophysics Division (HPD)** would receive \$777.9 million, an increase of \$26.9 million or 3.6% over the FY 2021 enacted level. The bill would fully fund the Heliophysics explorer program and provides \$25 million for the Space Weather Science and Applications program, which includes \$1 million to initiate a new Space Weather Center of Excellence. The bill also provides “up to the request level” for the Heliophysics Technology Program and the Solar Terrestrial Probes, which will allow HPD leadership to decide how to allocate the remaining \$537 million between those programs and other Heliophysics priorities including the Living with a Star program.

The bill provides \$880.7 million for the **Aeronautics Research Mission Directorate (ARMD)**, \$52 million or 6.3 percent, above the FY 2021 enacted level. Of the \$50 million provided for ARMD’s hypersonics technology activity, \$15 million is set aside for collaborative work between academia and industry. The bill would provide \$7 million above the request for university-led aeronautics materials research and \$32 million for the High-Rate Composite Aircraft Manufacturing (HiCAM) project with direction for the latter to leverage academic expertise. The bill would also direct NASA to establish supersonic test corridors for the Low-boom Flight Demonstrator testing, encourages NASA to continue to work with key stakeholders on Unmanned Traffic Management, and directs NASA to conduct an assessment of the aviation supply chain.

The **Space Technology Research Directorate (STMD)** would receive \$1.1 billion, equal to the FY 2021 enacted level but \$150 million below the requested level. The bill only obligates a total of \$373 million and leaves the rest of the STMD budget up to NASA to allot, however, certain programs that were not in the budget request -- such as nuclear thermal propulsion -- were provided funding out of the allocation which will further constrain STMD’s ability to fully fund new and ongoing programs and priorities. The bill is consistent with the House and Senate marks and reaffirms support for STMD’s status as a standalone directorate that supports technologies with NASA-wide applications. The bill would provide up to the request level for On-Orbit Servicing, Assembly, and Manufacturing-2 (OSAM-2), Fission Surface Power, Solar Electric Propulsion, and the Lunar Surface Innovation Initiative. The agreement also encourages NASA to support active debris technology development and to support Moon-to-Mars specific technologies, crosscutting applications for the commercial space economy, as well as the scientific and robotic exploration of planetary bodies and other destinations. Other investments in STMD include:

- \$227 million for the RESTORE-L Project and directs NASA to continue to work with industry and university partners to facilitate the commercialization of the technologies being developed;
- \$110 million for nuclear thermal propulsion, including \$80 million for the design of test articles to enable a flight demonstration;

- \$27 million for the Flight Opportunities Program;
- Up to \$5 million for innovative nanomaterials; and
- \$8.75 million On-surface Manufacturing Capabilities, in partnership with universities.

The bill would provide \$6.79 billion for **Exploration**, an increase of \$236.3 million above FY 2021 but \$88.7 million below the request. The Space Launch System (SLS) would receive \$2.6 billion, an increase above the \$2.48 billion request and Senate level but below the House’s \$2.63 billion allocation. This is indicative of the extent a difficult budget environment has blunted the aggressive growth of one of the most politically popular NASA programs. The Human Landing System (HLS) will receive the requested amount (\$1.195) despite strong support for larger increases offered by the House and Senate.

The bill would provide \$137 million for **Science, Technology, Engineering, and Math (STEM) Engagement**, an increase of \$10 million above FY 2021. The increase includes \$54.5 million for the Space Grant program. Congress would require NASA to allocate no less than \$860 thousand in base funding for each Space Grant state consortium to award competitive grants that address local, regional, and national STEM needs.

National Aeronautics and Space Administration
(In thousands of \$)

	FY 2021 Enacted	FY 2022 Request	FY 2022 House	FY 2022 Senate	FY 2021 Omnibus	Omnibus vs. FY 2021 enacted
NASA, total	23,271,300	24,801,500	25,038,400	24,837,336	24,041,300	770,000 (3.3%)
Science	7,300,800	7,931,400	7,969,500	7,901,400	7,614,400	313,600 (4.3%)
Earth Science	2,000,000	2,250,000	2,250,000	2,230,000	2,064,700	64,700 (3.2%)
Planetary Science	2,699,800	3,200,000	3,234,800	3,161,000	3,120,400	420,600 (15.6%)
Astrophysics	1,356,200	1,400,200	1,446,300	1,400,200	1,393,500	37,300 (2.75%)
JWST	414,700	175,400	175,400	175,400	175,400	-239,300 (57.7%)
Heliophysics	751,000	796,700	773,000	825,700	777,900	26,900 (3.6%)
Aeronautics	828,700	914,800	935,000	940,000	880,700	52,000 (6.3%)
Space Technology	1,100,000	1,425,000	1,280,000	1,250,000	1,100,000	-
Exploration	6,517,400	6,880,400	7,279,300	6,960,200	6,791,700	274,300 (4.2%)
Space Operations	4,017,400	4,017,400	3,961,300	4,128,246	4,041,300	23,900 (0.6%)
STEM Engagement	127,000	147,000	147,000	147,000	137,000	10,000 (7.9%)
Space Grant	51,000	57,000	60,000	57,000	54,500	3,500 (6.9%)

<i>EPSCoR</i>	26,000	26,000	26,000	26,000	26,000	-
<i>MUREP</i>	38,000	48,000	48,000	48,000	43,000	5,000 (13.2%)
Safety, Security, & Mission Services	2,936,000	3,049,200	3,030,000	3,064,200	3,020,600	84,600 (2.9%)
Construction and Environmental Compliance and Restoration	428,500	390,300	390,300	390,300	410,300	-18,200 (4.2%)
Office of Inspector General	41,200	46,000	46,000	46,000	45,300	4,100 (10%)

Source:

- Joint Explanatory Statement of Division B, COMMERCE, JUSTICE, SCIENCE, AND RELATED AGENCIES is available at <https://docs.house.gov/billsthisweek/20220307/BILLS-117RCP35-JES-DIVISION-B.pdf>.



National Science Foundation

The National Science Foundation (NSF) would be funded at \$8.838 billion in the omnibus, an increase of \$351.24 million or 4.1 percent over the fiscal year (FY) 2021 enacted level. While the biggest increase to NSF in over a decade, the funding level is \$648.76 million below the Senate proposed amount, \$796.04 million below the House proposal, and \$1.33 billion below the President's request.

The **Research and Related Activities (R&RA) account**, which funds all of NSF's research directorates, would be funded at \$7.16 billion, an increase of 3.6 percent or \$249.63 million over the FY 2021 level. The Omnibus would approve the creation of the new Directorate for **Technology, Innovation, and Partnerships (TIP)** within R&RA, but does not specify a funding level. The explanatory statement accompanying the omnibus outlines TIP's goals to advance science and engineering research as "leading to breakthrough technologies, finding solutions to national and societal challenges, strengthening U.S. global competitiveness, and providing training opportunities for the development of a diverse STEM workforce." The agreement would encourage NSF to award at least one **Regional Innovation Accelerator (RIA)** in FY 2022. The Explanatory Statement also encourages NSF to ensure TIP supports projects across the U.S., including in EPSCoR states. The agreement would provide \$40 million for the I-Corps program, equal to the FY 2021 enacted level, and encourages greater engagement with states that have not previously received awards. In addition to support for TIP, the Explanatory Statement reiterates the importance of existing NSF research and research infrastructure and directs NSF to keep all core research and research infrastructure at least at the FY 2021 level.

The Explanatory Statement discusses some, but not all of NSF's priority initiatives. It would direct NSF to spend no less than \$900 million to support **Climate Science and Sustainability Research** through the U.S. Global Change Research Program (USGCRP) and Clean Energy Technology priority areas. This represents a five percent increase over what NSF spent on these areas in FY 2021. The Explanatory Statement would provide no less than \$636 million for research related to **Artificial intelligence (AI)**, 4 percent above the FY 2021 funding level. Congress would encourage NSF to continue its workforce development efforts for AI and data literacy, including focused outreach to Minority Serving Institutions (MSIs) and community colleges. **Quantum Information Science** would be funded at \$220 million, 5 percent above the FY 2021 level. This amount would include \$170 million for activities related to the research areas authorized in the National Quantum Initiative Act and \$50 million for National Quantum Information Science Research Centers. The Explanatory Statement expresses support for continued investment in the **Spectrum Innovation Initiative** but does not specify a specific funding level for the initiative or advanced wireless research more generally.

As aligned with the National Science Board's **Geography of Innovation** initiative, the explanatory statement would direct NSF to report to the Committees on how it will support MSIs and institutions in EPSCoR states in leading large funding initiatives and centers. The agreement provides \$215 million for the **Established Program to Stimulate Competitive Research (EPSCoR)**, an increase of \$15 million above

the FY 2021 level. The agreement provides no less than \$22 million for the **Historically Black Colleges and Universities Excellence in Research (HBCU-EiR)**, a slight increase over the FY 2021 estimate of \$20 million.

The explanatory statement has several language items relating to scientific infrastructure. The **Mid-Scale Infrastructure R1 program** would be supported at no less than the FY 2021 level and NSF is encouraged to make at least two awards to EPSCoR states. It encourages NSF to continue planning and initial investments to advance **ultrafast and high-power laser technologies**. The explanatory statement would acknowledge the recent 2020 Decadal Survey in **Astronomy and Astrophysics** and states that, as well as support for a balanced portfolio of astronomy research, “NSF is expected to include the appropriate levels of support for recommended current and future world-class scientific research facilities and instrumentation in subsequent budget requests.” The Explanatory Statement also outlines continued support, at no less than FY 2021 levels, for **Scientific Facilities and Instrumentation** including operations at the Daniel K. Inouye Solar Telescope (DKI-ST), the Gemini Observatory, the Very Long Baseline Array (VLBA) receivers, and the Center for High Energy X-Ray Science (CHEXS). The omnibus would also provide the requested amount for the **Green Bank Observatory** and FY 2021 level for the **International Ocean Discovery Program**.

As in previous years, Congress would include language relating to **Navigating the New Arctic, Understanding Rules of Life, Online Influence, Re-Engineering Plastic Textiles, and Verification of the Origins of Rotation in Tornadoes Experiment-Southeast (VORTEX-SE)**. Other congressional research priorities are highlighted including **Harmful Algal Blooms, Domestic Manufacturing** (including steel research), **Deepfakes**, and **Disaster Research**. The agreement would provide up to \$2.5 million to establish the **Sustainable Chemistry Research program**. Finally, NSF is encouraged to study the national cyber workforce, building on a recent National Academies report titled, “Information Technology and the U.S. Workforce.”

The omnibus would provide \$249 million for the **Major Research Equipment and Facilities Construction Account (MREFC)**, \$8 million above the FY 2021 level and level with the budget request. The omnibus would include \$76.25 million for **Mid-Scale Research Infrastructure R2**, level with FY 2021 funding. Congress would also provide requested funding for **all ongoing MREFC construction projects**: Vera C. Rubin Observatory, Antarctic Infrastructure Modernization for Science, the Antarctic Infrastructure Recapitalization, Regional Class Research Vessels, and the High Luminosity – Large Hadron Collider Upgrade. The Explanatory Statement expresses concern about NSF’s planning for the next generation of scientific facilities and encourages NSF and the National Science Board to “develop a comprehensive and prioritized list of the next generation large-scale facilities requested by NSF supported science disciplines to ensure that the United States maintains its scientific leadership.”

The omnibus would provide \$1.01 billion for the **Education and Human Resources (EHR)** account, \$38 million or 3.9 percent above the FY 2021 level. This amount does not include the full consolidated Graduate Research Fellowship Program (GRFP) funding as NSF proposed. The Omnibus would provide \$148 million in EHR for GRFP, \$5.74 million above the FY 2021 EHR funding level. It would additionally allow NSF to transfer up to \$148 million from the R&RA account to fully fund the program in EHR. The explanatory statement would provide specific funding levels for several programs. In general, these increases are far below the increases proposed in the budget request or the House and Senate draft bills. Specific funding includes \$48.5 million for Hispanic Serving Institutions (HSI), \$2 million above the FY 2021 level. The deal would also fund the HBCU Undergraduate Program at \$38 million (\$1.5 million above the FY 2021 level); the Tribal Colleges and Universities Program (TCUP) at \$17.5 million (\$1 million

above the FY 2021 level); the Louis Stokes Alliances for Minority Participation (LSAMP) at \$51.5 million (\$2 million above the FY 2021 level); the Alliance for Graduate Education and the Professoriate (AGEP) at \$8.5 million (\$500,000 above the FY 2021 level); the Advancing Informal STEM Learning (AISL) at \$65 million (\$2.5 million above the FY 2021 level); the Centers for Research Excellence in Science and Technology (CREST) at \$25 million (\$1 million above the FY 2021 level); and Advancement of Women in Academic Science and Engineering Careers (ADVANCE) at \$18.5 million (\$500,000 above the FY 2021 level). Several programs would be funded at their FY 2021 levels, including: Improving Undergraduate STEM Education (IUUSE, \$90 million); the Robert Noyce Scholarship Program (\$67 million); and Advanced Technological Education (ATE, \$75 million). The Cybercorps Scholarship for Service program would be funded at \$63 million (\$3 million above the FY 2021 level) and NSF is again “urged to collaborate with National Initiative for Cybersecurity Education at NIST on efforts to develop cybersecurity skills in the workforce.” The report also reiterates new Senate language for FY 2022 encouraging NSF support hands-on learning opportunities and encouraging collaboration with the Department of Education on transformational education innovation and translation.

The Agency Operations and Award Management account is provided \$400 million, an increase of \$54.36 million or 15.7 percent above the FY 2021 level. This increased funding would enable NSF to support the administration costs associated with establishing the new TIP Directorate.

In addition to items specified in the explanatory statement, House committee report language that is not addressed carries forward, including items related to AI and bias; disinformation and misinformation; facility divestment; lead detection testing and monitoring; the Arecibo Observatory; combating Anti-Asian Hate Crimes and Incidents; carbon dioxide removal; critical minerals; dyslexia; high-performance computing; IceCube Neutrino Observatory; National Solar Observatory; Social, Behavioral, and Economic (SBE) sciences; bioprocessing and workforce development; marine and ocean sciences workforce development; and quantum computing at MSIs.

National Science Foundation
(In millions of \$)

	FY 2021 Enacted	FY 2022 Request	FY 2022 House	FY 2022 Senate	FY 2022 Omnibus	FY 2022 Final vs. FY 2021 Enacted
NSF, total	8,486.76	10,169.30	9,634.04	9,486.76	8,838.00	351.24 (4.1%)
Research and Related Activities	6,909.77	8,139.71	7,995.73	7,667.10	7,159.40	249.63 (3.6%)
Education and Human Resources	968.00	1,287.27	1,274.27	1,100.00	1,006.00	38.00 (3.9%)
Major Research Equipment and Facilities Construction	241.00	249.0	249.00	249.00	249.00	8.00 (3.3%)
Agency Operation and Award Management	345.64	468.30	390.02	445.64	400.00	54.36 (15.7%)
National Science Board	4.50	4.600	4.60	4.60	4.60	0.10 (2.2%)
Office of Inspector General	17.85	20.42	20.42	20.42	19.00	1.15 (6.4%)

Source:

- Joint Explanatory Statement of Division B, COMMERCE, JUSTICE, SCIENCE, AND RELATED AGENCIES is available at <https://docs.house.gov/billsthisweek/20220307/BILLS-117RCP35-JES-DIVISION-B.pdf>.



U.S. Department of Agriculture

The omnibus fiscal year (FY) 2022 Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriations bill provides \$25.125 billion in topline discretionary funding for U.S. Department of Agriculture (USDA), a \$1.426 billion increase over the FY 2021 enacted level.

The accompanying explanatory statement states, “Unless otherwise noted, the language set forth in House Report 117-82 and Senate Report 117-34 carries the same weight as language included in this explanatory statement and should be complied with unless specifically addressed to the contrary in this explanatory statement.” Of particular importance, this would carry forward the Senate report language recognizing the “Inadequate Infrastructure at Colleges of Agriculture” that “directs the Administration to demonstrate a commitment to this critical research infrastructure and maintenance backlog to ensure that America remains a global leader in agricultural production, research, and education.”

The **National Institute of Food and Agriculture (NIFA)** would be funded at \$1.64 billion in discretionary funding in the final agreement, \$66.8 million or 4.25 percent above FY 2021. This would include \$445 million for the Agriculture and Food Research Initiative (AFRI), an increase of \$10 million over FY 2021. Capacity and Extension programs are flat-funded or have modest increases. The bill would also provide a small increase for the Agricultural Genome to Phenome Initiative, funded at \$2 million, \$1 million over the FY 2021 enacted level. The bill would provide \$5 million for Capacity-Building for Non-Land-Grant Colleges of Agriculture and \$5 million for research equipment grants, the same funding levels as FY 2021. The omnibus would provide \$300,000 for a blue-ribbon panel to evaluate the structure of research and education at land-grant universities and \$5 million for the Farm of the Future program first initiated in FY 2021. The agreement would extend the cost-match waiver for the Specialty Crop Research Initiative (SCRI).

The omnibus would provide the **Agricultural Research Service (ARS)** Salaries and Expenses line with \$1.63 billion, a \$142 million increase over the FY 2021 enacted level. Importantly, both intramural and extramural research would be funded at no less than the FY 2021 level. Funding increases would be directed towards numerous research topics, including activated foods, human nutrition, precision aquaculture, and the National Bio and Agro-Defense Facility (NBAF).

In addition, \$1 million would be provided for USDA to build out the planning and management structure and hire staff for the **Agriculture Advanced Research and Development Authority (AGARDA)**, which was authorized in the 2018 Farm Bill. The omnibus would also direct \$1 million for the National Academies to conduct an analysis of the linkages between human health and soil health. Of importance to research and extension activities, the bill would also provide \$486.6 million for the **ReConnect Broadband Pilot**.

U.S. Department of Agriculture
(In Thousands of \$)

	FY 2021 Enacted	FY 2022 Request	FY 2022 House	FY 2022 Senate	FY 2022 Omnibus	FY 2022 Omnibus vs. FY 2021 Enacted
National Institute of Food and Agriculture, Discretionary	1,570,089	1,955,863	1,654,804	1,656,820	1,636,849	66,760 (4.3%)
Agriculture and Food Research Initiative (AFRI)	435,000	700,000	450,000	445,000	445,000	10,000 (2.3%)
Hatch Act	259,000	329,000	265,000	275,000	260,000	1,000 (0.4%)
Research at 1890 Institutions (Evans- Allen Program)	73,000	92,840	92,840	73,000	80,000	7,000 (9.6%)
Research Grants for 1994 Institutions	4,000	4,000	4,500	5,000	4,500	500 (12.5%)
McIntire-Stennis Cooperative Forestry Act	36,000	45,783	38,000	40,000	36,000	---
Smith-Lever Act 3(b) and 3(c)	315,000	315,000	320,000	330,000	320,000	5,000 (1.6%)
Extension Services at 1890 Institutions	62,000	62,000	67,000	62,000	65,000	3,000 (4.8%)
Extension Services at 1994 Institutions	8,500	8,500	9,500	10,000	9,500	1,000 (11.8%)
Payments to the 1994 Institutions	4,500	4,500	5,500	6,000	5,500	1,000 (22.2%)
Education Grants for 1890 Institutions	26,000	26,000	28,500	26,000	28,500	2,500 (9.6%)
Multicultural Scholars, Graduate Fellowship, and Institution Challenge Grants	9,500	9,500	9,500	10,000	10,000	500 (5.3%)
Hispanic-Serving Agricultural Colleges and Universities Endowment Fund	12,500	12,500	20,000	14,000	14,000	1,500 (12%)
Agricultural Research Service, Salaries & Expenses	1,491,784	1,849,590	1,637,046	1,675,040	1,633,496	141,712 (9.5%)
Food Safety and Inspection Service (FSIS)	1,075,703	1,165,589	1,153,064	1,153,064	1,108,664	32,961 (3.1%)
Animal and Plant Health Inspection Service (APHIS), Salaries & Expenses	1,064,179	1,102,222	1,121,427	1,122,116	1,106,744	42,565 (4%)

Source:

- Joint Explanatory Statement of Division A, AGRICULTURE, RURAL DEVELOPMENT, FOOD AND DRUG ADMINISTRATION, AND RELATED AGENCIES is available at <https://docs.house.gov/billsthisweek/20220307/BILLS-117RCP35-JES-DIVISION-A.pdf>



U.S. Geological Survey

The fiscal year (FY) 2022 omnibus would provide the U.S. Geological Survey (USGS) with \$1.39 billion, an increase of \$78.8 million or 6.0% above the FY 2021 enacted level and \$248 million below the FY 2022 President's Budget Request (PBR). This modest increase is in line with other similarly scaled increases to non-defense agencies across the federal government.

The bill would fund the **Ecosystems mission area** at \$277.9 million, which is \$18.8 million more than FY 2021 enacted levels, but \$80 million less than what was proposed in the FY 2022 President's budget request. The legislation would also provide \$ 51.9 million for the **National and Regional Climate Adaptation Science Centers (CASCs)**, an increase of \$10.6 million over the enacted level, but a decrease of \$32 million compared to the President's Budget Request for FY 2022. The bill would also provide \$26.5 million for the environmental health program to support contaminant biology, toxic substances hydrology, harmful algal bloom research, and PFOA/PFAS in water systems research. Also, within the Ecosystems mission area, the bill would provide \$26 million for the **Cooperative Research Units (CRUs)**, \$1 million above the FY 2021 enacted level. The bill would fund the **Water Resources mission area** at \$285.9 million, an increase of \$22.7 million over the FY 2021 enacted level. The bill would fund the *Water Resources Research Act* program, which supports Water Research Institutes across the country, at \$14 million, an increase of \$3 million above FY 2021 enacted levels. Further, this bill would provide \$29 million for the **Next Generation Water Observing System (NGWOS)** and includes language encouraging NGWOS to partner with state and local governments and the academic research community. The bill would provide \$4.5 million for NGWOS to work with universities to develop innovative water resource sensor technologies.

The bill would fund the **Natural Hazards account** at \$185.9 million, \$10.5 million above the FY 2021 enacted level. The Earthquake Hazards mission space would receive \$90 million, \$4.6 million above the FY 2021 enacted level. Included in Earthquake Hazards is the **ShakeAlert earthquake early warning (EEW) program**, which would receive \$28.6 million, an increase of \$2.9 million over the FY 2021 enacted level, for continued development and expansion of the system. The bill also provides \$1 million for USGS to work with Alaska on a plan to implement EEW within the next two years. The FY 2022 omnibus would provide essentially flat funding (\$7.2 million) for the **Global Seismographic Network**.

The bill would fund **Core Science Systems** at \$263.8 million, \$11.1 million above the FY 2021 enacted level. The bill would fund the **National Cooperative Geological Mapping Program** at \$42.4 million, an increase of \$2 million over enacted levels for FY 2021. The bill would provide the **3D Elevation Program (3DEP)** with a \$4.2 million increase over FY 2021 enacted levels. The bill would fund the **Energy and Mineral Resources mission area** at \$95.2 million, an increase of \$5.2 million above the FY 2021 enacted levels. Of this amount, the bill would provide \$63.7 million for the Mineral Resources Program, including \$10.6 million for the critical minerals **Earth Mapping Resources Initiative (Earth MRI)** and \$31.5 million for the **Energy Resources Program**.

U.S. Geological Survey

(in thousands of \$)

	FY 2021 Enacted	FY 2022 Request	FY 2022 House	FY 2022 Senate	FY 2022 Omnibus	FY 2022 Omnibus vs. FY 2021 Enacted
USGS, total	1,315,527	1,642,437	1,642,437	1,493,839	1,394,360	78,833 (6%)
Natural Hazards	175,484	207,748	207,748	197,748	185,998	1,720,514 (6%)
Earthquake Hazards	85,403	92,637	92,637	92,637	90,037	4,634 (5.4%)
Global Seismographic Network	7,153	7,212	7,212	7,212	7,212	59 (0.8%)
Ecosystems	259,077	358,217	355,217	326,491	277,897	18,820 (7.3%)
National and Regional Climate Adaptation Science Centers	41,335	84,403	81,903	84,403	51,903	10,568 (25.6%)
Energy and Mineral Resources	90,041	139,973	144,973	103,723	95,223	5,182 (5.8%)
Water Resources	263,120	288,394	293,394	297,894	285,894	22,774 (8.7%)
Water Resources Research Act	11,000	11,000	15,000	15,000	14,000	3,000 (27.3%)
Core Science Systems	252,688	341,874	328,192	267,902	263,802	11,114 (4.4%)
Science Support	95,734	121,421	118,103	114,271	99,736	4,002 (4.2%)
Facilities	179,383	184,810	194,810	184,810	184,810	5,427 (3%)

Source:

- Joint Explanatory Statement of Division G, DEPARTMENT OF THE INTERIOR, ENVIRONMENT, AND RELATED AGENCIES is available at <https://docs.house.gov/bills/thisweek/20220307/BILLS-117RCP35-JES-DIVISION-G.pdf>