



University of California Fiscal Year 2019 Appropriations Priorities

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TABLE OF CONTENTS

Subcommittee on Agriculture, Rural Development, Food and Drug Administration, and Related Agencies

Department of Agriculture	
National Institute of Food and Agriculture	1

Subcommittee on Commerce, Justice, Science and Related Agencies

National Aeronautics and Space Administration	2
National Science Foundation	4
Department of Commerce	
National Oceanographic and Atmospheric Administration	5

Subcommittee on Defense

Department of Defense	6
-----------------------------	---

Subcommittee on Energy and Water Development, and Related Agencies

Department of Energy	8
----------------------------	---

Subcommittee on Homeland Security

Department of Homeland Security	9
---------------------------------------	---

Subcommittee on the Interior, Environment and Related Agencies

Department of the Interior	
U.S. Geological Survey	10
National Endowment for the Humanities	11
National Endowment for the Arts	11
Environmental Protection Agency	12

Subcommittee on Labor, Health and Human Services, Education and Related Agencies

Department of Education	12
Department of Health and Human Services	
National Institutes of Health	16
Health Resources and Services Administration	17
Centers for Disease Control and Prevention	18
Agency for Healthcare Research and Quality	19

Subcommittee on State, Foreign Operations and Related Programs

U.S. Agency for International Development	20
---	----



SUBCOMMITTEE ON AGRICULTURE, RURAL DEVELOPMENT, FOOD AND DRUG ADMINISTRATION, AND RELATED AGENCIES

DEPARTMENT OF AGRICULTURE (USDA), NATIONAL INSTITUTE OF FOOD AND AGRICULTURE (NIFA)

The University of California (UC) requests a \$200 million increase in NIFA Research, Education and Extension Programs, funding which enables UC’s partnership with California’s agricultural producers to ensure a safe, secure and plentiful supply of food and energy, as well as clean and sustainable air, water and other natural resources. USDA funding also supports UC’s effective nutrition education efforts throughout California. Programs vital to UC include:

Agriculture and Food Research Initiative (AFRI)

- **Recommendation:** Between the funding levels provided for AFRI in the FY 2019 House and Senate bills, UC supports the House level, which funds AFRI at \$415 million.

FY 2019 President’s Budget Request	FY 2018 Enacted	FY 2019 House	FY 2019 Senate
\$375 million	\$400 million	\$415 million	\$405 million

UC supports the highest possible level of funding for AFRI, which funds competitive research on human nutrition and health, agricultural productivity and sustainability, renewable energy and biofuels, water supply, and air and water quality. In the 2016-17 academic year, UC had 97 active AFRI projects, totaling \$108 million in competitively awarded funding to find cutting-edge solutions for high-priority issues affecting California’s rural and urban communities.

USDA Capacity Grant programs – Hatch Act, Smith-Lever 3(b)-3(c) and McIntire-Stennis Cooperative Forestry

- **Recommendation:** Between the funding levels provided for USDA Capacity Grant programs in the FY 2019 House and Senate bills, UC supports the House’s funding level of \$259 million for the Hatch Act and \$315 million for Smith-Lever 3(b)-3(c), and supports both the House and Senate bills’ funding levels of \$36 million for McIntire-Stennis.

	FY 2019 President’s Budget Request	FY 2018 Enacted	FY 2019 House	FY 2019 Senate
Hatch Act	\$243.2 million	\$244 million	\$259 million	\$243 million
Smith-Lever 3(b)-3(c)	\$299.4 million	\$300 million	\$315 million	\$300 million
McIntire-Stennis	\$28.9 million	\$34 million	\$36 million	\$36 million

UC supports the highest possible levels of funding for the Hatch, Smith-Lever 3(b)-3(c) and McIntire-Stennis capacity grant programs, which are crucial to UC’s agricultural research and extension work across every county in California. These programs enable UC’s support for California agricultural producers by improving varietal development, production efficiencies, cropping methods and conservation practices.



UC also supports **robust funding for the Crop Protection/Pest Management (CP/PM) and Minor Crop Pest Management (IR-4) Program**, as well as **\$3 million for the Veterinary Services Grant Program**, and **\$2.5 million for the Food Avoidance Residue Databank**.

Expanded Food and Nutrition Education Program (EFNEP)

- **Recommendation: Between the funding levels provided for EFNEP in the FY 2019 House and Senate bills, UC supports the Senate level of \$70 million.**

FY 2019 President's Budget Request	FY 2018 Enacted	FY 2019 House	FY 2019 Senate
\$55 million	\$67.9 million	\$67.9 million	\$70 million

UC supports the highest possible level of funding for EFNEP, through which UC delivers hands-on, practical lessons on food, nutrition and healthy lifestyles to needy families. National studies show that for every \$1 invested in this Cooperative Extension program, approximately \$8 are saved in current and future health care costs for “at risk” populations.

SUBCOMMITTEE ON COMMERCE, JUSTICE, SCIENCE AND RELATED AGENCIES

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA)

NASA Science Mission Directorate (SMD)

- **Recommendation: Between the funding levels provided for the NASA SMD in the FY 2019 House and Senate bills, UC supports the House level of \$6.681 billion.**

FY 2019 President's Budget Request	FY 2018 Enacted	FY 2019 House	FY 2019 Senate
\$5.895 billion	\$6.222 billion	\$6.681 billion	\$6.400 billion

UC supports the highest possible level of funding for the NASA SMD, which funds research on the Earth, our solar system and the universe. UC researchers are highly successful in competing for NASA research awards, further enabling them to be international leaders in astronomy, earth and space sciences. Within SMD, UC supports **\$2.03 billion for NASA Earth Science programs**, whose mission is to “develop a scientific understanding of the Earth system and its response to natural and human-induced changes...[which] enables us to improve prediction of climate, weather, and natural hazards.”

UC also supports the Senate bill’s funding level of **\$352 million for continued development of the Wide Field Infrared Survey Telescope (WFIRST) mission**, within the Astrophysics Exoplanet Exploration program, which NASA has referred to as “the highest-priority large mission in the [National Academies’] Decadal Survey.” The House bill, unfortunately, provides only \$150 million in funding for the WFIRST mission.



NASA Space Technology Programs

- **Recommendation: Between the funding levels provided for NASA Space Technology programs in the FY 2019 House and Senate bills, UC supports the Senate level of \$933 million.**
- **UC also supports the Senate bill’s action to not consolidate the NASA Space Technology Mission Directorate into a new account as proposed in the House bill and the President’s FY 2019 Budget Request.**

FY 2019 President’s Budget Request	FY 2018 Enacted	FY 2019 House	FY 2019 Senate
\$0	\$760 million	Unspecified due to consolidation of programs	\$933 million

UC supports the highest possible level of funding for NASA Space Technology programs, including innovation initiatives such as the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs. Under these programs, UC and other academic institutions partner with NASA and other stakeholders to research and rapidly develop new space technologies.

While the Senate bill provides \$933 million in funding for NASA Space Technology programs, UC is concerned that the House bill would consolidate the Space Technology Mission Directorate into a new account as proposed in the President’s FY 2019 budget request, without specifying an exact funding level that would be available for NASA Space Technology programs or clarifying how these programs will be carried forward under the proposed consolidation. Given the uncertainties created regarding how NASA’s Space Technology programs will be treated under the House bill’s proposed consolidation, UC urges Congress to not adopt the House bill’s recommendation to consolidate the Space Technology Mission Directorate into the new account.

Space Grant College and Fellowship Program

- **Recommendation: Between the funding levels provided for the Space Grant College and Fellowship Program in the FY 2019 House and Senate bills, UC supports the Senate level of \$44 million.**

FY 2019 President’s Budget Request	FY 2018 Enacted	FY 2019 House	FY 2019 Senate
\$0	\$40 million	\$40 million	\$44 million

UC supports the highest possible level of funding for the Space Grant College and Fellowship Program, a national network that gives students practical hands-on training in support of NASA’s aeronautics and space missions, and inspires them to pursue science, technology, engineering and mathematics (STEM) careers. Headquartered at UC San Diego, the California Space Grant Consortium engages 28 California affiliates, including nine UC campuses, 10 California State University campuses, three NASA centers and other universities. UC is pleased that the House and Senate did not adopt the President’s FY 2019 budget request’s recommendation to eliminate funding for the program.



NATIONAL SCIENCE FOUNDATION (NSF)

- **Recommendation: Between the funding levels provided for the NSF in the FY 2019 House and Senate bills, UC supports the House level of \$8.175 billion.**

FY 2019 President's Budget Request	FY 2018 Enacted	FY 2019 House	FY 2019 Senate
\$7.472 billion	\$7.767 billion	\$8.175 billion	\$8.1 billion

UC supports the highest possible level of funding for NSF programs, which support merit-reviewed, fundamental research across all areas of science, engineering and education in NSF's seven research directorates and in cross-cutting research programs, including:

- Geosciences (GEO) – NSF's GEO research directorate addresses critical earth, oceans and atmospheric processes that impact our economic and national security;
- Social, Behavioral and Economics (SBE) – multidisciplinary research promoting understanding of people through the study of human behavior and societal questions and problems;
- Understanding the Brain (UtB) – cognitive and neuroscience research enabling understanding of brain complexity, developing tools to assist in this research and training future neuro-engineers;
- Advanced Manufacturing – cutting-edge tools and techniques that will transform the fields of bioengineering, cyber-manufacturing, nanosystems design and clean energy development; and
- Innovations at the Nexus of Food, Energy and Water Systems (INFEWS) – interdisciplinary research looking at the interconnections between these critical resource systems.

NSF sponsors about 20 percent of all merit-based university research across every discipline and helps to train and educate the next generation of the scientific and engineering workforce. In FY 2017, UC researchers successfully competed for \$515 million in NSF funding on 1,330 grant awards. Historically, UC's NSF research funding represents more than half of the total for all California institutions.

Within the Major Research Equipment and Facilities Construction (MREFC) account, **UC supports the budget request of \$48.82 million for the Large Synoptic Survey Telescope (LSST)**. In addition, **UC supports \$500,000 for LSST operations**, as requested under the Research and Related Activities account. UC Davis, UC Santa Cruz and the Lawrence Livermore National Lab are major scientific partners for the LSST, which was ranked as the top large ground-based astronomy project by the National Research Council's 2010 Decadal Survey.

NSF Education and Human Resources programs achieve excellence in STEM at all levels – including graduate and undergraduate education – contributing to a well-trained scientific workforce. Among them, the **Graduate Research Fellowship Program (GRFP)** provides critical support for the nation's top graduate students' research studies. In 2017, 262 UC graduate students from the 10 UC campuses earned prestigious GRFP fellowships – nearly 13 percent of the total awards for that year. UC students and campuses are also strongly represented in the **Innovation Corps (I-Corps)** programs, whose purpose is to strengthen the national innovation ecosystem to carry fundamental research discoveries into technologies, products, processes and services that benefit society. UC also participates in and supports the **INCLUDES program** – an initiative to develop science and engineering talent across all sectors of society, including underrepresented groups.



DEPARTMENT OF COMMERCE, NATIONAL OCEANOGRAPHIC AND ATMOSPHERIC ADMINISTRATION (NOAA)

UC supports the highest possible funding levels for extramural NOAA research programs on climate, weather, water and ocean observing, including:

Office of Oceanic and Atmospheric Research (OAR)

- **Recommendation: Between the funding levels provided for OAR in the FY 2019 House and Senate bills, UC supports the Senate level of \$508 million.**

FY 2019 President's Budget Request	FY 2018 Enacted	FY 2019 House	FY 2019 Senate
\$322 million	\$507.5 million	\$462 million	\$508 million

UC supports the highest possible level of funding for OAR research programs. UC researchers rely on NOAA competitive research funding for the collection of climate, weather and water data, including ocean observing for accurate weather forecasting, which is essential to California's agriculture, energy and fishing industries. UC also contributes to national priorities for world-class weather, atmospheric, water and drought research and observations that are vital for effective disaster preparedness, as well as the mission needs of the U.S. Navy, NASA and other federal agencies.

Within OAR, **UC supports robust funding for climate, weather and oceans research programs, including:**

- **\$66.25 million for the Competitive Research Program;**
- **\$38 million for the Regional Climate Data and Information Program;**
- **\$74.3 million for the Climate Laboratories and Cooperative Institutes;**
- **\$52.8 million for Sustained Ocean Observations and Monitoring;**
- **\$16.2 million for the US Weather Research Program; and**
- **\$11 million for the Integrated Ocean Acidification Program.**

Historically, UC receives about 10 percent of this funding annually. This account also funds the **National Integrated Drought Information System (NIDIS)** and the **Regional Integrated Sciences and Assessments (RISA)** programs, which provide dynamic and accessible drought information for the nation, and support research teams that work with public and private users to build our capacity to prepare for and adapt to environmental variability and change.

National Sea Grant College Program, OAR

- **Recommendation: Between the funding levels provided for the National Sea Grant Program in the FY 2019 House and Senate bills, UC supports the House level of \$80 million.**

FY 2019 President's Budget Request	FY 2018 Enacted	FY 2019 House	FY 2019 Senate
\$0	\$65 million	\$80 million	\$71 million



UC supports the highest possible level of funding for the National Sea Grant College Program, a university-based coastal and marine research network, which facilitates knowledge transfer from researchers to the marine industry and the public. Based at the UC San Diego Scripps Institution of Oceanography, California’s Sea Grant Program sponsors research and extension activities involving public and private institutions throughout the state.

Office of Marine and Aviation Operations (OMAO), Aviation Operations and Aircraft Services, Operations, Research, and Facilities (ORF)

- **Recommendation: Between the funding levels provided for OMAO ORF in the FY 2019 House and Senate bills, UC supports the Senate level of \$35.7 million.**

FY 2019 President’s Budget Request	FY 2018 Enacted	FY 2019 House	FY 2019 Senate
\$34.6 million	\$34.2 million	\$22 million	\$35.7 million

UC supports the highest possible level of funding for the OMAO ORF, including \$3 million for Increased Western Winter Storm Observations. The location, timing and intensity of heavy precipitation events on the U.S. West Coast are controlled largely by the characteristics of land-falling atmospheric rivers (ARs). There is a pressing need to improve prediction of ARs to support water management and flood control information needs – as revealed by the Oroville Dam Spillway event. Enhanced observations, modeling and data assimilation are critical to improving predictability of AR landfalls with lead times of weeks to months.

Regional Integrated Ocean Observing System (IOOS) in the National Ocean Service

- **Recommendation: Between the funding levels provided for IOOS in the FY 2019 House and Senate bills, UC supports the House level of \$37.5 million.**

FY 2019 President’s Budget Request	FY 2018 Enacted	FY 2019 House	FY 2019 Senate
\$19.4 million	\$35.0 million	\$37.5 million	\$37 million

UC supports the highest possible level of funding for the IOOS. IOOS involves 17 federal agencies and a national network that provide new tools and forecasts for maritime commerce, fisheries, aquaculture, offshore energy, coastal communities, public health and other users’ needs. UC is active in two systems, the Central and Northern California Ocean Observing System (CeNCOOS) and the Southern California Coastal Ocean Observing System (SCCOOS).

SUBCOMMITTEE ON DEFENSE

DEPARTMENT OF DEFENSE (DOD)

Basic Research (6.1)

- **Recommendation: Between the funding levels provided for Defense 6.1 Basic Research in the FY 2019 House and Senate bills, UC supports the Senate level of \$2.798 billion.**



FY 2019 President's Budget Request	FY 2018 Enacted	FY 2019 House	FY 2019 Senate
\$2.269 billion	\$2.340 billion	\$2.298 billion	\$2.798 billion

UC supports the highest possible level of funding for Defense 6.1 Basic Research within a total request of **\$15.457 billion for the Defense Science and Technology (6.1-6.3) research and development portfolio** and is pleased that the Senate bill includes a significant increase above the FY 2018 enacted level. This increase will help to ensure a balanced research and development pipeline that is vital to our national security. Conducted by the Army, Navy, Air Force and the Office of the Secretary, Defense Basic (6.1) and Applied (6.2) research programs fund the largest share of DOD-sponsored university research, particularly in the physical and computer sciences and engineering. The UC research partnership with DOD spans more than 50 years and has led to a wide range of technological innovations, including new advanced materials, communications and computing, and life-saving medical discoveries and technologies.

Within the Defense Science and Technology portfolio, **UC supports:**

- **\$3.44 billion for the Defense Advanced Research Projects Agency (DARPA)**, which invests in high-risk, high-reward research to develop breakthrough military capabilities;
- **\$111.691 million for Army University and Industry Research Centers (PE 0601104A)**, including:
 - **\$6 million for the Army University Affiliated Research Center (UARC) – the Institute of Collaborative Biotechnologies** – at UC Santa Barbara, and **\$18 million in line J13 for University and Industry Initiatives**; and
 - **\$17.5 million for the Army Capability Accelerator**, a partnership involving UC Berkeley, to promote technology-focused entrepreneurship addressing national security challenges;
- **\$477.056 million for Navy Defense Research Science Programs (PE 0601153N)**, which support scientific study and experimentation to increase knowledge and understanding in national security-related aspects of physical, engineering, environmental and life sciences.
- **\$149.895 million for Navy University Research Initiatives, including an increase of \$20 million for the Defense University Research Instrumentation Program (DURIP) (PE 0601103N)**;
- **\$74.9 million for Ocean Warfighting Environment Applied Research, including an increase of \$10 million for Research at Sea in support of Task Force Ocean priorities and an increase of \$5 million for Naval Special Warfare Research and Development (PE 0602435N)**; and
- **Funding for ongoing and new DOD advanced manufacturing innovation institutes, under the Manufacturing USA program.**

Defense Basic Research accounts also support education and training for students who will become DOD's future scientific and technological workforce. UC supports the highest possible funding levels for the **National Defense Education Program and the National Defense Science and Engineering Graduate Fellowships program**. UC researchers also provide vital information through the social science research **Minerva Initiative**, which deepens our understanding of the cultural and political conditions in areas of the world that have strategic importance to our national security.



SUBCOMMITTEE ON ENERGY AND WATER DEVELOPMENT, AND RELATED AGENCIES

DEPARTMENT OF ENERGY (DOE)

Office of Science (OS)

- **Recommendation: UC supports the conference report’s funding level of \$6.585 billion for DOE OS for FY 2019.**

FY 2019 President’s Budget Request	FY 2018 Enacted	FY 2019 House	FY 2019 Senate	FY 2019 Conference Report
\$5.391 billion	\$6.26 billion	\$6.60 billion	\$6.65 billion	\$6.585 billion

UC supports the highest possible level of funding for the DOE OS, the primary federal agency supporting basic physical sciences research, which is vitally important to our country’s economic and national security. OS research at UC includes: basic energy sciences, advanced clean energy sources, energy efficiency technologies, biological and environmental research, high performance scientific computing, new materials, engineering and STEM education and fellowship programs. UC researchers also collaborate at DOE’s 17 world-class national laboratories with access to the largest collection of major scientific user facilities in the world. Collectively, these facilities serve over 32,000 university researchers, students and industry scientists every year.

Within OS, **UC supports research programs and scientific infrastructure investments that are fundamental to U.S. innovation leadership**, including:

- **\$105 million for Berkeley Lab’s National Energy Research Scientific Computing Center and \$85 million for the Energy Sciences Network (ESnet)**, which play vital roles in the nation’s high-performance computing and advanced computing networking ecosystem (Advanced Scientific Computing Research).
- **\$62 million to keep the upgrade of the Lawrence Berkeley National Laboratory (Berkeley Lab) Advanced Light Source (ALS-U) on schedule** (Basic Energy Sciences).
- **Robust funding for the Energy Frontier Research Centers (EFRCs)**, which are partnerships focused on grand challenges and basic research needs identified in major strategic planning efforts by the scientific community, **and for the Energy Innovation Hubs** – centers that combine basic and applied research with engineering to accelerate scientific discovery on critical energy issues. These programs support multidisciplinary collaborations that enable UC faculty and students to work with federal laboratories and industry scientists (Basic Energy Sciences).
- **\$100 million for the Bioenergy Research Centers (BRCs)**, as well as funding to support the following three initiatives led by the Berkeley Lab:
 - **\$6.8 million for Next Generation Ecosystem Experiments (NGEE) – Tropics;**
 - **\$6.8 million for the Watershed Function Scientific Focus Area (SFA);** and
 - **\$5.7 million for the AmeriFLUX Long-Term Earth System Observations** (Biological and Environmental Research).
- **\$5 million for the Biological and Environmental Program Integration Center (BioEPIC).**

Advanced Research Projects Agency-Energy (ARPA-E)

- **Recommendation: UC supports the conferece report’s funding level of \$366 million for ARPA-E for FY 2019.**



FY 2019 President's Budget Request	FY 2018 Enacted	FY 2019 House	FY 2019 Senate	FY 2019 Conference Report
\$0	\$353 million	\$325 million	\$375 million	\$366 million

UC supports the highest possible level of funding for ARPA-E, which funds technology concepts with the potential to radically transform the energy sector, but are too early in development to attract private-sector investment. In less than a decade, ARPA-E has invested in more than 400 projects, leading to the creation of new companies and attracting more than \$1.25 billion in follow-on private sector investment. UC researchers are among the most successful ARPA-E awardees.

UC supports robust funding for the Office of Energy Efficiency and Renewable Energy (EERE) and supports the conference report's funding level of \$2.374 billion. UC supports funding for programs within EERE that support UC and UC-affiliated labs to research, develop, demonstrate and deploy clean energy technologies, including:

- **\$320 million for the Advanced Manufacturing Office;**
- **\$226 million for the Building Technologies Office (BTO), including \$50 million for the Appliance Standards Program;**
- **344 million for the Vehicle Technologies Office, including \$28 million for the Clean Cities Program; and**
- **\$10 million for the Strategic Programs Office/International Initiatives.**

UC supports ongoing efforts across multiple DOE offices to address “energy-water nexus” issues related to the interconnections between our nation’s energy and water systems, **including \$20 million for the Clean Water Hub under the Advanced Manufacturing Office.**

UC also supports the highest possible funding for the ongoing Subsurface Technology and Engineering Research [SubTER] Initiative, which is focused on achieving transformational improvements in harnessing sustainable subsurface energy. The DOE offices of Fossil Energy, Nuclear Energy and EERE are involved in this ambitious scientific initiative.

SUBCOMMITTEE ON HOMELAND SECURITY

DEPARTMENT OF HOMELAND SECURITY (DHS)

Research, Development and Innovation, Science and Technology (S&T) Directorate

- **Recommendation: Between the funding levels provided for the DHS S&T Directorate in the FY 2019 House and Senate bills, UC supports the Senate level of \$464 million.**

FY 2019 President's Budget Request	FY 2018 Enacted	FY 2019 House	FY 2019 Senate
\$289.7 million	\$469.3 million	\$457.3 million	\$464 million



University Programs, S&T Directorate

- UC is pleased that both the House and Senate bills provide \$40.5 million in funding for University Programs, S&T Directorate.

FY 2019 President's Budget Request	FY 2018 Enacted	FY 2019 House	FY 2019 Senate
\$21.7 million	\$40.5 million	\$40.5 million	\$40.5 million

UC supports the highest possible level of funding for Research Development and Innovation programs and for University Programs within the DHS S&T Directorate. The S&T Directorate funds basic and applied research to develop advanced technologies and methodologies to protect the nation's communities, ports, coasts, food supplies, borders and infrastructure. UC researchers have successfully competed for research grants on nuclear detection, food system protection, public health assessment and first responder safety. University Programs support collaborative, multi-disciplinary research at universities across the country that contribute to prevention and response to homeland security threats, as well as STEM education programs.

SUBCOMMITTEE ON THE INTERIOR, ENVIRONMENT AND RELATED AGENCIES

DEPARTMENT OF INTERIOR, U.S. GEOLOGICAL SURVEY (USGS)

USGS Earthquake Hazards Program (EHP)

- Recommendation: UC supports \$83.4 million for the USGS EHP.

UC Request	FY 2019 President's Budget Request	FY 2018 Enacted	FY 2019 House	FY 2019 Senate
\$83.4 million	\$51 million	\$83.4 million	TBD	TBD

USGS Global Seismographic Network (GSN)

- Recommendation: UC supports \$7.32 million for the USGS GSN.

UC Request	FY 2019 President's Budget Request	FY 2018 Enacted	FY 2019 House	FY 2019 Senate
\$7.32 million	\$4.93 million	\$6.65 million	TBD	TBD

Within the EHP program, UC requests \$16.1 million to fully develop and operate the West Coast earthquake early warning system. UC scientists are also working to improve capabilities of the Central and Eastern United States Network (CEUSN). Effective earthquake preparedness and monitoring tools are critical to public safety in California and the nation. Researchers at UC and other California universities contribute greatly to the study and analysis of these Earth processes. The GSN request will fund the remainder of a three-year, \$5.13 million next-generation sensor deployment effort.



USGS State Water Resources Research Institutes (WRII), Water Resources Research Program

- **Recommendation: UC supports \$9 million for the USGS WRII Program.**

UC Request	FY 2019 President's Budget Request	FY 2018 Enacted	FY 2019 House	FY 2019 Senate
\$9 million	\$0	\$6.5 million	TBD	TBD

The USGS WRII Program is the only federally supported, national network for applied water resource research, education, training and outreach. UC operates the California Institute for Water Resources (CIWR), which supports researchers in developing solutions to costly and difficult water problems in California. With ongoing drought and water management concerns, CIWR is actively engaged in providing information and resources to California producers, consumers, businesses, and state and local governments. CIWR maintains a [website](#) that is updated daily with flood- and drought-related information.

NATIONAL ENDOWMENT FOR THE HUMANITIES (NEH)

- **Recommendation: The university appreciates the proposed funding increase for the NEH in the FY 2019 House and Senate bills and supports the funding levels as proposed.**

FY 2019 President's Budget Request	FY 2018 Enacted	FY 2019 House	FY 2019 Senate
\$42.3 million	\$152.8 million	\$155 million	\$155 million

UC supports the highest possible funding level for the NEH, which would provide critical support to the only federal agency dedicated to promoting and enhancing research, education and public programs in the humanities. UC researchers and scholars compete for NEH funds to strengthen teaching and learning; create new knowledge through extensive, in-depth study; and preserve and protect cultural and educational treasures. The UC Humanities Network supports, stimulates and facilitates excellence in humanities research across all 10 UC campuses. The network allows for important academic discourse, while promoting knowledge, discovery and modes of understanding that are crucial to California and its local and global communities.

NATIONAL ENDOWMENT FOR THE ARTS (NEA)

- **Recommendation: The university appreciates the proposed funding increase for the NEA in the FY 2019 House and Senate bills and supports the funding levels as proposed.**

FY 2019 President's Budget Request	FY 2018 Enacted	FY 2019 House	FY 2019 Senate
\$29 million	\$152.8 million	\$155 million	\$155 million

UC supports the highest possible funding level for the NEA, which is dedicated to providing people across the U.S. with opportunities to participate in and experience the arts. NEA funding supports arts partnerships, special arts initiatives, individual projects and research in all 50 states that contribute to the strength and success of America's neighborhoods, students, schools and cultural life. UC researchers and scholars compete for NEA funds, and successful NEA-funded projects benefit students and the public by providing access to art that would not otherwise be available in many California communities.



ENVIRONMENTAL PROTECTION AGENCY (EPA)

EPA, Office of Science and Technology

- **Recommendation:** Between the funding levels provided for the EPA, Office of Science and Technology in the FY 2019 House and Senate bills, UC supports the Senate level of \$717.7 million.

FY 2019 President's Budget Request	FY 2018 Enacted	FY 2019 House	FY 2019 Senate
\$449 million	\$713.8 million	\$643.7 million	\$717.7 million

UC supports the highest possible level of funding for EPA Science and Technology programs to protect human health and the environment. EPA's research programs – Air, Climate and Energy (ACE), Safe and Sustainable Water Resources (SSWR), Sustainable and Healthy Communities (SHC) and Chemical Safety for Sustainability (CSS) – fund foundational science related to chemical safety, land restoration, air and water pollution prevention and national security. UC researchers have current EPA research grants on issues such as nutrient transport in groundwater, the future use of pesticides in warming environments and environmental risks to children's health.

SUBCOMMITTEE ON LABOR, HEALTH AND HUMAN SERVICES, EDUCATION AND RELATED AGENCIES

DEPARTMENT OF EDUCATION (ED)

Pell Grants

- **Recommendation:** Between the maximum award levels provided for Pell Grants in the FY 2019 House and Senate bills, UC supports the Senate bill, which provides a maximum Pell Grant of \$6,195.

Pell Grant Maximum Award

FY 2019 President's Budget Request	FY 2018 Enacted	FY 2019 House	FY 2019 Senate
\$5,920	\$6,095	\$6,095	\$6,195

Pell Grant Discretionary Appropriations

FY 2019 President's Budget Request	FY 2018 Enacted	FY 2019 House	FY 2019 Senate
\$22.48 billion	\$22.48 billion	\$22.48 billion	\$22.48 billion

UC supports the highest possible level of funding for Pell Grants, as well the highest possible maximum Pell Grant award. The President's budget request proposes flat funding for the Pell Grant program in FY 2019 with a base award maximum award of \$5,920 for the 2019-20 academic year.

UC supports the elimination of any rescissions to the surplus in Pell funding to protect the future integrity of the program. The university appreciates that year-round Pell Grants – reintroduced in FY 2017 – are preserved in FY 2019.



More than 82,000 UC undergraduate students currently receive Pell Grants, a critical foundation for the state and institutional aid UC students also receive. Currently, California residents with family incomes of up to \$80,000 receive aid that covers their tuition and nearly two-thirds of UC undergraduates receive grant assistance that allows them to cover part of the cost of food, housing and other expenses. All UC students are expected to contribute to their own cost of education with loans, earnings from work or savings. Without robust funding for Pell Grants, UC students would have to borrow more, work beyond what is considered manageable or take longer to complete their degrees.

Supplemental Educational Opportunity Grant (SEOG)

- **Recommendation: While flat-funded and below UC’s original request, the university supports the proposed funding levels for SEOG in the House and Senate bills, \$840 million.**

FY 2019 President’s Budget Request	FY 2018 Enacted	FY 2019 House	FY 2019 Senate
\$0	\$840 million	\$840 million	\$840 million

Federal Work-Study (FWS)

- **Recommendation: While flat-funded and below UC’s original request, the university supports the proposed funding levels for FWS in the House and Senate bills, \$1.13 billion.**

FY 2019 President’s Budget Request	FY 2018 Enacted	FY 2019 House	FY 2019 Senate
\$500 million	\$1.13 billion	\$1.13 billion	\$1.13 billion

UC supports the highest possible level of funding for the SEOG and FWS programs. These campus-based programs are essential to the network of federal, state and institutional support that ensures affordable access to a UC education for students from a broad range of income levels. The proposed elimination of the SEOG program in the President’s budget request represents a loss of \$10.7 million to UC students, and the 50 percent cut in the FWS program will adversely impact more than 13,100 UC students. There is significant demonstrated need for strong and sustained funding for these programs.

Federal Perkins Loan Program

UC supports \$250 million for Federal Perkins Loan cancellations. These funds, at a minimum, should be appropriated to reimburse campuses for loan cancellations made when borrowers complete service, as required by law. At the present time, the cumulative reimbursable cancellations owed to UC campuses by Department of Education totals approximately \$24 million.

Student Loans

UC supports strong and sustained efforts to keep the cost of student loans manageable in the Direct Loan Program, and to ensure that the federal government can provide borrowers with the essential services they need. UC also supports the restoration of federal loan subsidies for graduate students and maintaining the subsidy for low-income undergraduate students. Proposals that provide relief to needy students are the basis of the federal investment in federal student aid, and efforts to reform and streamline loan repayment plans and improve program effectiveness will benefit borrowers and the federal government.



TRIO Programs

- **Recommendation:** Between the funding levels provided for the TRIO program in the FY 2019 House and Senate bills, UC supports the House level of \$1.06 billion.

FY 2019 President's Budget Request	FY 2018 Enacted	FY 2019 House	FY 2019 Senate
\$950 million	\$1.01 billion	\$1.06 billion	\$1.01 billion

GEAR UP

- **Recommendation:** Between the funding levels provided for the GEAR UP program in the FY 2019 House and Senate bills, UC supports the House level of \$360 million.

FY 2019 President's Budget Request	FY 2018 Enacted	FY 2019 House	FY 2019 Senate
\$0	\$350 million	\$360 million	\$350 million

UC supports the highest possible funding levels for TRIO and GEAR UP programs. These complementary and demonstrable successful early intervention and academic preparation programs only reach a small fraction of eligible students, and should be expanded to allow further participation. TRIO's Student Support Services program is specifically targeted to help low-income, first-generation students with undergraduate retention, transfer and completion success. At UC, 42 percent of undergraduate students are first-generation and 38 percent of undergraduate students qualify for Pell Grants. After facing significant cuts over the past several years, funding for these programs should be increased.

Aid for Hispanic-Serving Institutions (HSIs) – Title V

Part A – Strengthening Hispanic-Serving Institutions

- **Recommendation:** Between the funding levels provided for HSIs Part A in the FY 2019 House and Senate bills, UC supports the Senate level of \$125.9 million.

FY 2019 President's Budget Request	FY 2018 Enacted	FY 2019 House	FY 2019 Senate
\$0	\$123.2 million	\$123.2 million	\$125.9 million

Part B – Promoting Postbaccalaureate Opportunities for Hispanic Americans

- **Recommendation:** Between the funding levels provided for HSIs Part B in the FY 2019 House and Senate bills, UC supports the Senate level \$11.3 million.

FY 2019 President's Budget Request	FY 2018 Enacted	FY 2019 House	FY 2019 Senate
\$0	\$11 million	\$11.1 million	\$11.3 million

UC supports the highest possible funding levels for Title V, Part A competitive grants to help HSIs expand and enhance their undergraduate academic programs, and **Title V, Part B**, which promotes



postbaccalaureate opportunities for Hispanic Americans designed to help them succeed in graduate school. UC has several campuses that serve large numbers of Hispanic students and would be eligible to apply for these funds.

Teacher Preparation and Teacher Quality Programs

UC supports \$2.35 billion for Supporting Effective Instruction State Grants authorized in Title II of the reauthorized Elementary and Secondary Education Act and \$43.1 million in Teacher Quality Partnership Grants. These funds improve teacher preparation programs and help recruit and train high-quality K-12 teachers. UC also supports robust funding for Department of Education programs that promote teacher quality, spark improvements in computer science instruction, promote preparation of STEM education teachers, support school leadership training, enhance professional development and advance innovations in teaching and learning. These programs faced significant cuts – and in the case of Teacher Quality Partnership Grants, total elimination – in the President’s budget request, undermining the university’s ability to help address the growing shortage of high-quality educators.

Title VI International Education Programs

- **Recommendation: While below UC’s original request for Title VI International Education Programs, the university supports the proposed funding level of \$72.2 million in the FY 2019 House and Senate bills.**

FY 2019 President’s Budget Request	FY 2018 Enacted	FY 2019 House	FY 2019 Senate
\$0	\$72 million	\$72.2 million	\$72.2 million

UC supports the highest possible funding levels for Title VI International Education programs. At UC, Title VI supports research and expertise through National Resource Centers, which are important tools in serving the nation’s economic, diplomatic, defense and national security needs. Title VI funding has suffered significant cuts in the past several years, yet additional Title VI funds are needed for our nation’s increasingly global economy to ensure a steady pipeline of individuals with global understanding and language proficiency across professions.

Graduate Assistance in Areas of National Need (GAANN)

- **Recommendation: While flat-funded and below UC’s original request for GAANN, the university supports the proposed funding level of \$23 million in the FY 2019 House and Senate bills.**

FY 2019 President’s Budget Request	FY 2018 Enacted	FY 2019 House	FY 2019 Senate
\$0	\$23 million	\$23 million	\$23 million

UC supports the highest possible funding levels for graduate education support in the Department of Education to drive excellence and innovation in business, science, academia and government. The continued erosion of federal graduate fellowship support over the past several years – including the elimination of GAANN, which awards fellowships to graduate students who contribute to federally-determined fields of national interest – has been devastating to the talented scholars who require this support to continue their work. A stronger national commitment to graduate education is



needed to sustain a pipeline of skilled workers in all sectors of the economy, as well as qualified professors who will mentor and train the teachers and students of tomorrow.

Institute of Education Sciences (IES)

- **Recommendation: Between the funding levels provided for IES programs in the FY 2019 House and Senate bills, UC supports the Senate level of \$615.5 million.**

FY 2019 President's Budget Request	FY 2018 Enacted	FY 2019 House	FY 2019 Senate
\$522 million	\$613.5 million	\$613.5 million	\$615.5 million

UC supports the highest possible funding level for IES programs. The university is a major innovator in educational research and is continuously working to increase the knowledge base on teacher effectiveness and the science of learning, while working in K-12 schools to improve the quality of educational practice. UC researchers use competitive funds from IES to address the nation's most pressing education needs, from early childhood to adult education, including increasing the number and quality of math and science teachers, improving teacher evaluations and the creation of successful professional development models.

DEPARTMENT OF HEALTH AND HUMAN SERVICES (HHS), NATIONAL INSTITUTES OF HEALTH (NIH)

- **Recommendation: Between the funding levels provided for the NIH in the FY 2019 House and Senate bills, UC supports the Senate level of \$39.1 billion.**

FY 2019 President's Budget Request	FY 2018 Enacted	FY 2019 House	FY 2019 Senate
\$35.5 billion	\$37.084 billion	\$38.3 billion	\$39.1 billion

UC supports the highest possible funding for the NIH, which is critically needed to drive U.S. biomedical research progress with breakthrough scientific discoveries on cancer, the brain and precision medicine, and to achieve life-saving cures and treatments for chronic illnesses and life-threatening diseases. This request includes support for the highest levels of funding possible for the multi-year 21st Century Cures Act, in addition to increased annual NIH funding. NIH research funding enables California's biomedical research industry to remain a global innovation leader and supports hundreds of thousands of jobs and economic growth in California and across the nation.

In FY 2017, UC researchers successfully competed for more than \$1.9 billion in NIH awards in support of biomedical research and training, nearly half of the amount awarded to all California research institutions.



HHS, HEALTH RESOURCES AND SERVICES ADMINISTRATION (HRSA)

Title VII Health Professions Training

- **Recommendation: Between the funding levels provided for Title VII Health Professions Training programs in the FY 2019 House and Senate bills, UC supports the Senate level of \$393.2 million.**

FY 2019 President's Budget Request	FY 2018 Enacted	FY 2019 House	FY 2019 Senate
\$5 million	\$391.2 million	\$372.5 million	\$393.2 million

UC supports the highest possible level of funding for the HRSA Title VII Health Professions Training Programs. UC operates the largest health sciences and medical training program in the country with more than 14,000 students.

The Title VII medical education training and loan programs are critical sources of financial support for UC students and physician faculty as they are the only federal programs designed to educate providers in interdisciplinary settings to meet the needs of special and underserved populations, as well as increase minority representation in California's health care workforce. UC trains half of California's physicians, and of the medical students and residents educated in California, as many as 70 percent stay and practice in California. UC students who benefit from Title VII funding ensure that residents of California's medically underserved areas have access to physician services. The president's proposal to eliminate all but \$5 million of Title VII funding in FY 2019 would substantially undermine UC medical students' capacity to treat low-income individuals across thousands of miles of medically underserved areas. UC has a strong record of producing physicians who are committed to helping people with special needs and/or residing in medically underserved areas. In FY 2017, UC successfully competed for \$13.63 million in Title VII funding.

Title VIII Nursing Workforce Development

- **Recommendation: Between the funding levels provided for Title VIII Nursing Workforce Development programs in the FY 2019 House and Senate bills, UC supports the Senate level of \$249.5 million.**

FY 2019 President's Budget Request	FY 2018 Enacted	FY 2019 House	FY 2019 Senate
\$83 million	\$249.5 million	\$241.5 million	\$249.5 million

UC supports the highest possible funding level for the HRSA Title VIII Nursing Workforce Development Programs, which provide training for entry-level and advanced degree nurses to improve access to and quality of health care in underserved areas. These programs provide the largest source of federal funding for nursing education, including loans, scholarships, traineeships and programmatic support to many of the more than 1,600 nursing students who study in nursing programs at four UC campuses (Davis, Irvine, Los Angeles, and San Francisco). In FY 2017, UC successfully competed for \$2.25 million in Title VIII funding. The proposed cut of \$166.5 million in the President's budget request for the Nursing Workforce Development Programs would be detrimental to the nursing profession's development and ensuring a growing number of older patients have access to nurses' care.



With the nursing shortage in California expected to exceed 190,000 by 2030, and the need to address the nursing crisis in California and the rest of the country, \$266 million in Title VIII funding is necessary to sustain this critical workforce.

HHS, CENTERS FOR DISEASE CONTROL AND PREVENTION (CDC)

- **Recommendation: While UC is disappointed that the FY 2019 House and Senate bills would fund the CDC at a level significantly below the FY 2018 enacted level, between the funding levels provided in the bills, UC supports the Senate level of \$7.9 billion.**

FY 2019 President's Budget Request	FY 2018 Enacted	FY 2019 House	FY 2019 Senate
\$5.59 billion	\$8.3 billion	\$7.6 billion	\$7.9 billion

UC supports the highest possible funding for the CDC. The proposed cuts in the CDC's budget would threaten the capacity of UC campuses, which are at the forefront of public health, to fulfill UC's tripartite mission of training the next generation of clinicians (including experts in public health), innovating biomedical discoveries and delivering high-quality patient care. Over the last 10 years, UC received approximately \$460 million from the CDC for a wide range of research, training and service projects. In addition to funds received directly from CDC, the university also receives sub-awards from non-federal sponsors with CDC contracts.

National Institute for Occupational Safety and Health (NIOSH)

- **Recommendation: Between the funding levels provided for NIOSH in the FY 2019 House and Senate bills, UC supports the House level of \$339.2 million.**

FY 2019 President's Budget Request	FY 2018 Enacted	FY 2019 House	FY 2019 Senate
\$200 million	\$335.2 million	\$339.2 million	\$336.3 million

UC supports the highest possible funding for NIOSH, which is the primary federal agency dedicated to occupational injury prevention and control. The programs funded by NIOSH, which include scientific research, training and education activities, support efforts to address occupational health and safety needs and improve working conditions. UC also appreciates that the House and Senate bills would not move NIOSH out of the CDC to the NIH.

NIOSH Education and Research Centers (ERCs)

- **Recommendation: Between the funding levels provided for the NIOSH ERCs in the FY 2019 House and Senate bills, UC supports the House level of \$31 million.**

FY 2019 President's Budget Request	FY 2018 Enacted	FY 2019 House	FY 2019 Senate
\$0	\$29 million	\$31 million	\$29 million

UC supports the highest possible funding level for the ERCs, which provide academic and research training programs in the occupational safety and health disciplines, as well as education and outreach programs to prevent workplace related injury and disease. UC operates two of the nation's 18 ERCs – the



northern California ERC based at UCSF and UC Berkeley, and the southern California ERC based at UCLA and UC Irvine.

NIOSH Agriculture, Forestry and Fishing (AFF) Program

- **Recommendation: Between the funding levels provided for the NIOSH AFF Program in the FY 2019 House and Senate bills, UC supports the House level of \$27.5 million.**

FY 2019 President's Budget Request	FY 2018 Enacted	FY 2019 House	FY 2019 Senate
\$0	\$25.5 million	\$27.5 million	\$25.5 million

UC supports the highest possible funding level for the AFF Program, which is the only substantive federal effort designed to prevent workplace injuries in the agricultural sector. UC operates one of the nine regional NIOSH AFF Centers, the Center for Agricultural Disease and Injury Research, Education and Prevention located at UC Davis.

HHS, AGENCY FOR HEALTHCARE RESEARCH AND QUALITY (AHRQ)

- **Recommendation: While flat-funded and below UC's original funding request for AHRQ, UC supports the FY 2019 House and Senate funding level of \$334 million.**

FY 2019 President's Budget Request	FY 2018 Enacted	FY 2019 House	FY 2019 Senate
\$0	\$334 million	\$334 million	\$334 million

The President's budget request proposes eliminating funding for AHRQ and integrating the agency's activities within the NIH as the National Institute for Research on Safety and Quality (NIRSQ). NIRSQ would be funded at \$256 million in FY 2019, representing a decrease in funding of \$78 million (23 percent) from the \$334 million enacted in FY 2018. AHRQ serves a unique and necessary purpose, and its funding is not duplicative with the health services research funding provided to NIH. UC opposes integrating AHRQ's activities into NIH if the move is intended to reduce funding for AHRQ's current activities as well as diminish status for the health care quality and safety research that today's AHRQ produces. UC supports keeping AHRQ's work within a distinct agency under the Department of Health and Human Services (HHS) where its work product can continuously be elevated by the HHS secretary as policies are formulated and coordinated across all HHS agencies that affect health care delivery.

UC supports the highest possible level of funding for AHRQ, the singular federal agency charged with improving the safety and quality of America's health care delivery system. UC is concerned with annual reductions in AHRQ funding along with the Patient Centered Outcomes Research Institute's (PCORI) Patient Centered Outcomes Research (PCOR) Trust Fund expiring Sept. 30, 2019. Together, PCORI and AHRQ promote advances in health care safety and quality that must be maintained.

UC is a beneficiary of AHRQ grants. AHRQ provided funding to the UCLA Center for Health Policy Research to conduct the California Health Interview Survey (CHIS), the nation's largest state health survey and a critical source of data on Californians. CHIS provides representative data on all 58 counties in California, including a detailed picture of health and the health care needs of California's large and diverse population.



SUBCOMMITTEE ON STATE, FOREIGN OPERATIONS AND RELATED PROGRAMS

U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT (USAID)

Higher Education Institutional Capacity Development Partnerships

- Recommendation: UC supports funding for the Higher Education Institutional Capacity Development Partnerships at the highest possible level.

UC Initial Request	FY 2019 President's Budget Request	FY 2018 Enacted	FY 2019 House	FY 2019 Senate
\$35 million	-	\$35 million	\$35 million	TBD

Feed the Future Food Security Innovation Labs

- Recommendation: Between the funding levels provided for the Feed the Future Food Security Innovation Labs in the FY 2019 House and Senate bills, UC supports the House level of \$60 million.

FY 2019 President's Budget Request	FY 2018 Enacted	FY 2019 House	FY 2019 Senate
-	\$55 million	\$60 million	\$55 million

UC supports the highest possible level of funding for the Higher Education Institutional Capacity Development Partnerships and for the Feed the Future Food Security Innovation Labs. These USAID-university partnerships bring unparalleled research capabilities to the U.S. government's global development and food security initiatives. UC leads six of the 24 Innovation Labs, a network of U.S. colleges and universities that partner with institutions in developing countries to conduct research and training in order to develop agricultural practices and technologies to improve safe and sustainable food production.