



- To: Massachusetts Delegation Legislative Directors, Education LAs and Science LAs
- From: Boston University Jennifer Grodsky and Emily Burlij, Federal Relations
 Harvard University Suzanne Day, Jon Groteboer, and Peter DeYoe, Office of Federal Relations
 Massachusetts Institute of Technology David Goldston, Philip Lippel, and Kate Stoll, Washington Office

Date: March 4, 2019

Re: FY 2020 Programmatic Requests for Federal Science and Education Agencies

Please find attached information on fiscal year (FY) 2020 priorities for Massachusetts's research universities to support your programmatic requests to the Appropriations Committee. We appreciate the strong support for research and education amongst our delegation and we are happy to provide further information or assistance as required.

As the FY 2020 appropriations process begins, a return of the budget caps first imposed under the Budget Control Act of 2011 would result in a \$126 billion, or 10 percent, reduction in federal discretionary spending. This would include a \$55 billion cut to non-defense accounts, which would make it impossible to adequately invest in programs such as research and student aid, both of which enable Massachusetts's research universities to lead the way in scientific discovery and educating future leaders. This in turn attracts private investment and contributes to the vibrant economy of Massachusetts. A significant downturn in research and higher education funding could threaten that ecosystem of innovation.

To ensure the U.S. remains a leader in knowledge creation, technology development, and innovation, and to address issues of national importance, we urge Congress to continue to make research and higher education top priorities in the FY 2020 appropriations process by raising the budget caps and enacting strong funding levels.

Thank you for considering these requests, for your ongoing advocacy for research and education, and for your support of Massachusetts research universities.

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

National Institutes of Health (NIH)

FY 2020 Request: At least \$41.6 billion **FY 2019 level**: \$39.1 billion **Dear Colleague**: Generally circulated by Reps. Dave McKinley (R-WA), Andre Carson (D-IN), Peter King (R-NY), and Susan Davis (D-CA) **Dear Colleague**: Generally circulated by Sen. Bob Casey (D-PA)

Massachusetts institutions received over \$2.88 billion in funding from NIH in FY 2018. Our researchers are making discoveries to advance treatments and cures for diseases such as cancer, Alzheimer's disease, and mental health disorders. NIH also provides irreplaceable training support to early career biomedical researchers at our institutions; this support must be sustained so as not to disrupt the research workforce pipeline.

Department of Education, Pell Grants

FY 2020 Request: \$6,345 Maximum Discretionary Award **FY 2019 Enacted**: \$6,195 Maximum Discretionary Award

The Pell Grant program is the foundation of federal student aid, helping approximately 122,000 students attend college in Massachusetts. Our universities build on the foundation provided by Pell by supplementing federal aid with our own institutional financial aid. As a result, we can maintain affordability and outstanding educational quality.

Department of Education, Federal Work Study (FWS)

FY 2020 Request: \$1.43 billion **FY 2019 Enacted**: \$1.13 billion

Massachusetts universities participate in campus-based student aid programs at a very high level, with an FWS allocation of nearly \$44.6 million in the 2017-18 academic year. FWS helps student succeed in college and prepare for the world of work.

Department of Education, Supplemental Education Opportunity Grant (SEOG) FY 2020 Request: \$1.028 billion FY 2019 Enacted: \$840 million

Campus-based student aid programs help students by leveraging federal dollars with universities' own aid. SEOG awards are available to students with "exceptional need," and \$1.028 billion would restore funding to the program's fiscal year 2005 level. More than 43,000 Massachusetts students receive SEOG.

Department of Education, Institute for Education Sciences FY 2020 Request: \$670 million FY 2019 Enacted: \$615.46 million

Investing in peer-reviewed education research activities at the Institute of Education Sciences results in innovations in both teaching and learning, improving classrooms around the nation. IES is the only federal agency exclusively devoted to funding educational research.

Department of Education, International Education and Foreign Language

FY 2020 Request: \$106 million **FY 2019 Enacted**: \$72.2 million **Dear Colleague**: Generally circulated by Rep. Price (D-NC) **Dear Colleague**: Generally circulated by Sen. Schatz (D-HI)

The Title VI/ Fulbright-Hays International Education and Foreign Language programs support training in critical foreign languages, educational outreach activities for K-12 schools, and curriculum development for the multidisciplinary study of regions around the world, including Africa and the Middle East. In an increasingly interconnected world, these international education programs are an essential means for Massachusetts to develop a globally fluent citizenry.

Department of Education, Graduate Assistance in Areas of National Need (GAANN) FY 2020 Request: \$48 million FY 2019 Enacted: \$23.05 million

GAANN fellowships provide financial support for Massachusetts graduate students pursuing doctoral education in fields that are critical to national priorities, including: biology; chemistry; computer and information sciences; engineering; mathematics; nursing; physics; and educational assessment, evaluation and research. \$48 million would restore the program to its fiscal year 2010 level.

Institute of Museum and Library Services (IMLS)

FY 2020 Request: \$270.6 million (\$232 million for Libraries and \$38.6 million for Museums) **FY 2019 Enacted**: \$231 million

IMLS is the primary source of federal funding for the nation's museums and libraries, including many in Massachusetts, and this request reflects the newly authorized level for the agency. Through grants and local programs, the IMLS supports education, preservation, digitization, and many more programs to enrich the community. In 2017, the IMLS provided \$3.2 million in grants straight to the Commonwealth.

COMMERCE, JUSTICE, SCIENCE AND RELATED AGENCIES

National Science Foundation (NSF) FY 2020 Request: \$9 billion FY 2019 Enacted: \$8.08 billion Dear Colleague: Generally circulated by Reps. G.K. Butterfield (D-NC) and David McKinley (R-WV) Dear Colleague: Generally circulated by Sen. Ed Markey (D-MA)

NSF is the federal government's primary funder of basic research, supporting work across scientific disciplines with the potential to foster breakthrough discoveries. In FY 2018, 1,318 awards totaling approximately \$503 million to more than 120 institutions in Massachusetts. NSF makes awards based on intellectual merit and broader societal impact, through a proven system of peer review. Our institutions support research across all NSF disciplines.

National Aeronautics and Space Administration (NASA) Science account FY 2020 Request: \$7.5 billion FY 2019 Enacted: \$6.9 billion

NASA is a key federal contributor to advancing research in the physical sciences on Earth and in space, While Massachusetts institutions continue to play key roles in major NASA missions, individual researchers largely seek funding through the Science Mission Directorate's pool of grants that support individual investigator research using data from these and other missions. This funding – divided across the Directorate's four discipline-specific Divisions and the Space Grant Program to encourage space education – collectively comprises the bulk of NASA research at our universities.

National Aeronautics and Space Administration (NASA) Space Technology FY 2020 Request: \$973 million FY 2019 Enacted: \$927 million

NASA Space Technology develops innovative tools and invests in cutting edge technology development that support some of the best minds in science. Moreover, it funds fellowship programs to support the next generation of innovators on Massachusetts campuses.

DEFENSE

Department of Defense (DOD) Basic (6.1) Research FY 2020 Request: \$2.77 billion FY 2019 Enacted: \$2.62 billion

Within the DOD basic research (6.1) program, our institutions support sustained funding for critical programs such as the Multidisciplinary University Research Initiative, which supports teams of faculty conducting research in high priority fields that cross typical scientific disciplines; the National Defense Science and Engineering Graduate Fellowships program, which provides fellowships for doctoral students pursuing a degree of interest to the DOD; and the Minerva Initiative, the Department's premier social science research program that deepens understanding of the social, cultural, and political forces affecting areas of strategic importance to the U.S.

Defense Advanced Research Projects Agency (DARPA) FY 2020 Request: \$3.63 billion **FY 2019 Enacted**: \$3.43 billion

The Defense Advanced Research Projects Agency (DARPA) funds high-risk, high-reward research that can lead to innovative applications for the warfighter. DARPA is known for its willingness to fund ambitious research, leading to game changing technologies such as GPS and the Internet.

ENERGY AND WATER DEVELOPMENT AND RELATED AGENCIES

Department of Energy (DOE) Office of Science

FY 2020 Request: \$7 billion

FY 2019 Enacted: \$6.58 billion

Dear Colleague: Reps. Bill Foster (D-IL), Lee Zeldin (R-NY), Ben Ray Lujan (D-NM), and Randy Weber (R-TX); contact Todd Ringler (<u>Todd.Ringler@mail.house.gov</u>) with Rep. Luján, Sarah Talmage (<u>Sarah.Talmage@mail.house.gov</u>) with Rep. Zeldin, Samantha Warren (<u>Samantha.Warren@mail.house.gov</u>) with Rep. Foster, or Erica Lefaive (<u>Erica.Lefaive@mail.house.gov</u>) with Rep. Weber.

The DOE Office of Science is a key funder of discovery-based and use-inspired basic research in fields including physics, chemistry, materials science, environmental science, advanced scientific computing, biology, and applied mathematics. Massachusetts universities and scientific organizations received more than \$71 million in DOE Office of Science funding in fiscal year 2018, with major awards from every part of the Office. Massachusetts scientists also take advantage of world-class user facilities at ten DOE National Laboratories funded through the Office of Science.

DOE Advanced Research Projects Agency-Energy FY 2020 Request: \$400 million FY 2019 Enacted: \$366 million

ARPA-E supports early-stage energy technologies with transformational potential in order to lessen our reliance on energy imports, reduce energy-related emissions such as greenhouse gases, and improve energy efficiency. The full request would allow the agency to hold competitions in 7 or 8 new areas. Twenty-three awards are currently being executed by Massachusetts' teams or have been selected for awards, including some at each of our universities. Thirty-eight additional awards have already completed their projects in the agency's first decade of operation. We estimate ARPA-E projects have collectively brought well over \$150 million in federal funding to bear on advanced energy technology development in the Commonwealth.

DOE Office of Energy Efficiency and Renewable Energy

FY 2020 Request: at least \$2.4 billion **FY 2019 Enacted**: \$2.38 billion

The Office of Energy Efficiency and Renewable Energy funds research, development, and implementation programs aimed at improving the energy efficiency of homes, buildings, and industrial processes (including five ManufacturingUSA Institutes with Massachusetts members); developing clean and efficient new vehicles and transportation systems; and developing affordable renewable energy technologies such as wind, solar, and geothermal. Massachusetts universities and companies working towards a low-carbon energy future received over \$44 in FY2018, helping to make Massachusetts and New England leaders in the clean energy revolution.

INTERIOR, ENVIRONMENT AND RELATED AGENCIES

National Endowment for the Humanities (NEH) FY 2020 Request: \$167.5 million FY 2019Enacted: \$155 million

NEH provides support for humanities research, such as history, preserving endangered languages and cultures, and literature. NEH programs stimulate creativity and innovation, helping us better understand social and international dimensions of complex questions.

National Endowment for the Arts (NEA) FY 2020 Request: \$167.5 million FY 2019 Enacted: \$155 million

NEA provides support for Americans to participate in and engage with the arts across a wide variety of media and programs, including exhibits, concerts, readings, and other performances. This commitment to the arts—through state, local, and public-private partnerships—shares the benefits of these programs with every district in every state.

Environmental Protection Agency (EPA) Science and Technology FY 2020 Request: \$734.7 million **FY 2019 Enacted**: \$706.4 million

EPA's Science and Technology (S&T) programs provide the foundation for credible decisionmaking to safeguard human health and ecosystems from environmental pollutants. EPA supports research in a number of areas, including air quality, chemical safety, climate change, water and homeland security, among others. The agency's budget – including the budget for its S&T programs – has steadily eroded over the past decade. As a consequence, EPA is now in the preliminary stages of consolidating some offices and functions that reportedly includes eliminating the National Center for Environmental Research (NCER), which provides extramural funding to institutions in the Commonwealth for high-quality research in exposure, effects, risk assessment and risk management. We respectfully urge Congress to begin reversing the yearslong decline in EPA S&T funding and direct EPA to maintain NCER.