

of radio spectrum increases. The Committee looks forward to the report highlighting NTIA's ongoing efforts on this front.

UNITED STATES PATENT AND TRADEMARK OFFICE

SALARIES AND EXPENSES

(INCLUDING TRANSFERS OF FUNDS)

The Committee recommends \$3,450,681,000 for the United States Patent and Trademark Office (PTO), the full amount of fiscal year 2020 fee collections estimated by the Congressional Budget Office. PTO shall continue to provide the Committee monthly reports on PTO's actual and projected fee collections, application volumes, performance, and staffing.

Patent End-2-End (PE2E).—PTO shall continue to provide quarterly reports to the Committee on the status of PE2E, including the proposed retirement of legacy systems, cost savings associated with those retirements, and any efficiencies achieved in patent processing because of these investments.

NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

The Committee recommends \$1,040,172,000 for National Institutes of Standards and Technology (NIST), which is \$54,672,000 above fiscal year 2019.

SCIENTIFIC AND TECHNICAL RESEARCH AND SERVICES

(INCLUDING TRANSFER OF FUNDS)

The Committee recommends \$751,000,000 for NIST's Scientific and Technical Research and Services (STRS) programs, which is \$26,500,000 above fiscal year 2019 and \$139,281,000 above the request. The Committee also rejects the proposed reductions to Laboratory Programs, Corporate Services, and Standards Coordination and Special Programs and provides no less than the fiscal year 2019 level for those programs.

Quantum Information Science.—Within funds appropriated for STRS, the Committee provides no less than \$8,000,000 above the fiscal year 2019 level for Quantum Information Science, as authorized in the National Quantum Initiative Act to support and expand basic and applied quantum information science and technology research and development (R&D) of measurement science and standards. Further, the Committee encourages NIST to expand its collaboration with other entities, including industry, universities, and Federal laboratories, to help advance the field of quantum information science and engineering.

Artificial Intelligence (AI).—The recommendation includes \$4,000,000 above the fiscal year 2019 level for Artificial Intelligence that has the potential to produce transformative technologies and scientific breakthroughs that will improve Americans' lives.

Textile research.—The Committee recognizes the importance of the U.S. textile industry and encourages NIST to pursue advanced textile and apparel research, including manufacturing techniques.

Greenhouse Gas Program and Urban Dome Initiative.—The Committee recognizes the significant value in NIST's Greenhouse Gas

Program and Urban Dome initiative that seeks to leverage existing high-spatial density regional monitoring networks and external R&D partnerships. These cost-effective capabilities substantially expand and broaden NIST laboratory capabilities for investigating and developing measurement tools that support independent means for determining the accuracy of emissions inventory data at urban and regional scales. The Committee has included no less than \$100,000 above the fiscal year 2019 level of funding for the Greenhouse Gas Program and Urban Dome Initiative to continue and expand sensor network deployments.

Cybersecurity and Privacy.—The proliferation of data generation, storage, and use associated with the digital economy is making it increasingly important to protect that data with effective cryptography and privacy standards. The Committee is concerned that individual, corporate, and public-sector data privacy is continuously at risk from attacks by individual actors, criminal organization, and nation-states. The Committee urges NIST to address the rapidly emerging threats in this field by furthering the development of new and needed cryptographic standards and technologies.

Metals-Based Additive Manufacturing.—The Committee provides up to \$5,000,000 for competitive external grants for academic institutions to support research, development, and workforce training to overcome barriers to high-volume additive manufacturing of metals. While the Committee is aware of recent breakthroughs in metals-based additive manufacturing, major technical barriers still exist to dramatically improving build rates that would enable commercial markets to benefit from high-volume, metals-based additive manufacturing.

Pyrrhotite in Concrete Aggregate.—NIST shall consider establishing standards for acceptable levels of pyrrhotite in concrete aggregate and shall continue providing technical assistance to those interested in pyrrhotite detection, prevention, and mitigation tools.

Forward Looking Building Standards.—The Committee is concerned about how climate change will impact the built environment, and that standards previously set with an assumption of a stable climate system will expose many Federal and non-Federal investments to significant, but avoidable, risk. Therefore, the Committee directs NIST, in collaboration with other appropriate Federal agencies and interested non-Federal parties, to identify a consistent and authoritative set of climate information that emphasizes forward-looking climate data and projections that should be utilized in the standard-setting process. This effort shall serve to aid both Federal and non-Federal bodies to develop standards, building codes, and voluntary standards that take into account increasingly extreme weather events and other climate change challenges.

Regenerative Medicine Standards.—The Committee is pleased that NIST, the Food and Drug Administration, and the Standards Coordinating Body continue to work to implement the regenerative medicine standards provisions enacted in the 21st Century Cures Act (Public Law 114–255). Currently, work is underway to develop processes and criteria for identifying, prioritizing, and assessing the quality, safety, feasibility, and cost-benefit of such standards. This work will create a foundation that allows industry, regulatory authorities, and other stakeholders to reduce barriers to regenera-

tive medicine research and product development and accelerate the market readiness of these life-changing medical treatments.

Forensic Sciences.—The Committee provides \$1,500,000 above the fiscal year 2019 amount for forensic science research. Additionally, the Committee provides \$3,000,000 to support the Organization of 22 Scientific Area Committees and \$1,000,000 to support technical merit evaluations previously funded by transfer from the Department of Justice.

5G Telecommunications.—The Committee notes the importance of the development of 5G telecommunications technologies as a matter of job creation, economic development, and national security. The Committee is concerned with a lack of criteria and processes to evaluate evolving threats associated with emerging telecommunications technologies. The Committee also recognizes the importance of efficient spectrum use in the development of 5G networks. The Committee urges NIST to accelerate efforts to coordinate among industry to promote voluntary security standards and the development of measurement tools to increase spectrum efficiency.

INDUSTRIAL TECHNOLOGY SERVICES

The Committee recommends \$169,172,000 for Industrial Technology Services, which is \$14,172,000 above fiscal year 2019. The Committee rejects the Administration’s proposed elimination of the Manufacturing Extension Partnership (MEP) program and provides \$154,000,000 for MEP as well as \$15,172,000 for the National Network for Manufacturing Innovation, also known as “Manufacturing USA.”

Cybersecurity Training.—Within the increase to MEP, the Committee directs NIST to maintain the core services of the MEP and encourages NIST to utilize existing expertise within its Information Technology Laboratory to increase cybersecurity technical training to small manufacturers to strengthen their cybersecurity capabilities given the troubling threats from state and non-state actors and other emerging threats.

CONSTRUCTION OF RESEARCH FACILITIES

The Committee recommends \$120,000,000 for NIST construction. NIST shall continue to provide updates on the projects funded within this account, to include milestones and total amount of funding necessary for completion.

Safety, Capacity, Maintenance, and Major Repairs (SCMMR).—Within the amount provided for Construction of Research Facilities, the agreement includes no less than \$77,500,000 for NIST to address its most pressing SCMMR projects.

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

The Committee recommends a total of \$5,478,974,000 in discretionary funds for the National Oceanic and Atmospheric Administration (NOAA), which is \$54,279,000 above fiscal year 2019 and \$1,022,006,000 above the President’s request. The Committee notes that the proposed decrease in Procurement, Acquisitions, and Construction (PAC) for fiscal year 2020 reflects the anticipated reduction in NOAA’s flagship weather satellite programs as they enter