Section 216 places limitations on the obligation of funds from certain Department of Justice accounts and funding sources.

Section 217 allows certain funding to be made available for use in Performance Partnership Pilots.

Section 218 increases the threshold for balances in the United States Trustee System Fund.

Section 219 provides access for Tribes to national information databases.

Section 220 makes the Attorney General responsible for payment of witness fees.

Section 221 makes United States Marshals Service employees eligible for danger pay for certain foreign deployments.

Section 222 provides funding to develop and operate a database on law enforcement use of force and officer misconduct.

TITLE III

SCIENCE

OFFICE OF SCIENCE AND TECHNOLOGY POLICY

The agreement includes $5,544,000 for the Office of Science and Technology Policy (OSTP).

Emerging Contaminants.—Within 30 days of the enactment of this Act, OSTP shall update its October 2018 ''Plan for Addressing Critical Research Gaps Related to Emerging Contaminants in Drinking Water'' as directed in Senate Report 116–127 and adopted by Public Law 116–93. The update shall identify any necessary program, policy, or budgetary resources required, by agency, to support implementation of the Federal research strategy for fiscal years 2021, 2022, and 2023. OSTP is further directed to brief the Committees on the National Emerging Contaminant Research Initiative within 30 days of enactment of this Act.

Research Integrity.—The Committees have yet to receive the assessment that will form the baseline for guidance for government agencies, universities, and the broader research community on indicators of risks to research integrity from foreign influence. OSTP shall report within 30 days of enactment of this Act to the Committees on the extent of these issues and provide OSTP's suggested risk mitigation actions that can be implemented by universities and the U.S. Government.

Research on the Great Lakes Resources.—The vessels of the Great Lakes ecosystem Federal research fleet are nearing the end of their useful service lives. OSTP is reminded of the requirement to submit an assessment of the fleet contained in Senate Report 115–275, adopted by Public Law 116–6.

Federal Unmanned Aircraft Systems (UAS) Procurement.—OSTP is encouraged to identify domestically-produced UAS options as alternatives to commercially-available foreign UAS that may allow for the unintended transmittal of data being collected and to coordinate guidelines that will allow for secure utilization of UAS by all Federal agencies.

NATIONAL SPACE COUNCIL

The agreement includes $1,965,000 for the activities of the National Space Council.

Quarterly Briefings.—The National Space Council is directed to provide the Committees with quarterly briefings, beginning with the annual budget submission, that identify current and emerging threats to maintaining U.S. leadership in space-based activities by the Federal Government, industry, and academia and the associated plans and policies to maintain that leadership.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

The agreement includes $23,271,278,000 for the National Aeronautics and Space Administration (NASA).

Partial Funding Requests.—The agreement notes that going forward, NASA should refrain from requesting only part of the funding it requires to accomplish all of its missions. Additionally, the agreement objects to NASA's efforts in recent fiscal years to redirect funding away from priorities clearly set by the Congress in law and has included more specific bill language to curtail such actions.

Quarterly Launch Schedule.—NASA shall continue providing the Committees with a quarterly launch schedule, by mission, which describes the risks associated with any launch delays, the impacts of launch delays to other missions in the launch queue, a budget estimate of the anticipated carrying costs for missed launch windows, as well as any adjustments to launch windows for delayed missions.

Oversight and Accountability.—NASA acquisition management remains on the U.S. Government Accountability Office's (GAO's) ''high risk'' list. NASA is expected to maintain focus on improving oversight and accountability. NASA is directed to cooperate fully with GAO and shall provide timely program analysis, evaluation data, and other relevant information so GAO can report to Congress shortly after the annual budget submission, and semiannually thereafter, on the status of large-scale NASA programs, projects, and activities. NASA is further directed to brief the Committees within 30 days of the annual budget submission on the reserves, along with confidence level if appropriate, assumed in the proposed funding level for each directorate, theme, program, project, or activity.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

(In thousands of dollars)

Program	Amount
Science:	
Earth Science	$2,000,000
Planetary Science	2,700,000
Astrophysics	1,356,200
James Webb Space Telescope	414,700
Heliophysics	751,000
Biological and Physical Sciences	79,100
Total, Science	7,301,000
Aeronautics	828,700
Space Technology	1,100,000
Exploration:	
Exploration Systems Development	4,582,600
Orion Multi-purpose Crew Vehicle	1,406,700
Space Launch System (SLS) Vehicle Deployment	2,585,900
Exploration Ground Systems	590,000
Exploration Research and Development	1,972,800
Gateway	698,900
Human Landing System	850,000
Total, Exploration	6,555,400
Space Operations	3,988,200
Science, Technology, Engineering, and Mathematics (STEM) Engagement:	
NASA Space Grant	51,000
EPSCoR	26,000
Minority University Research Education Project	38,000
STEM Education and Accountability Projects	12,000
Total, Science, Technology, Engineering, and Mathematics (STEM) Engagement	127,000
Safety, Security and Mission Services	2,936,500
Construction and Environmental Compliance and Restoration	390,278
Office of Inspector General	44,200
Total, NASA	$23,271,278

SCIENCE

The agreement includes $7,301,000,000 for Science.

Earth Science.—The agreement includes $2,000,000,000 for Earth Science and adopts all funding levels designated by the House, except as follows.

Earth Science Research and Analysis.—The agreement directs no less than $25,000,000 above the requested level for Earth Science Research and Analysis.

Earth Science Decadal.—In keeping with the recommendations of the Earth Science decadal survey, NASA should plan to competitively select future missions. An increase in competed, Principal Investigator (PI)-led missions can encourage better cost and schedule management, infuse new technologies, and contribute to workforce.

Earth System Science Pathfinder Missions.—The agreement includes $343,900,000 for Earth System Science Pathfinder missions.

Venture Class Missions.—The agreement includes $263,600,000 for Venture Class Missions.

NASA—Indian Space Research Organisation (ISRO) Synthetic Aperture Radar, Geosynchronous Littoral Imaging and Monitoring Radiometer (GLIMR), and Geostationary Carbon Cycle Observatory (GeoCARB).—The agreement fully supports, at no less than the request level, NASA–ISRO Synthetic Aperture Radar, the GLIMR instrument, and GeoCARB. GeoCARB is due to launch in 2023 and will demonstrate the feasibility of using a commercial communications satellite to host a scientific instrument to measure vegetation off-gassing and detect methane. GeoCARB could serve as a model for meeting future Earth Science research needs in a cost-effective manner. The agreement is supportive of collaborative research that works to advance our understanding of the behavior of the Earth by engaging academia, particularly students, in its studies and investigations, as these partnerships ensure that NASA's data expertise remains up-to-date and increases the research capacities at universities.

Planetary Science.—The agreement includes $2,700,000,000 for Planetary Science.

Lunar Discovery.—The agreement includes up to $451,500,000 for the Lunar Discovery and Exploration, including $22,000,000 to continue the Lunar Reconnaissance Orbiter, $70,000,000 for the new Lunar Future initiative, and up to the request level for Commercial Lunar Payload Services (CLPS). NASA is expected to provide funding under the CLPS program only for lunar landers and rovers majority-designed, developed, and built in the United States. Additionally, this level of funding supports a regular cadence of at least one robotic mission to the lunar surface per year. The Lunar Discovery and Exploration program shall adhere to the lunar science priorities established by decadal surveys and the National Research Council's Scientific Context for the Exploration of the Moon by funding activities that meet both lunar science and human exploration needs through varied mission types.

Planetary Defense.—The agreement includes $156,400,000 for planetary defense of which $66,400,000 is for the Double Asteroid Redirect Test (DART) to ensure a June 2021 launch and $90,000,000 is for other Near Earth Object Observations missions and data analysis. NASA is expected to request adequate resources for simultaneous development of DART and the Near Earth Object Surveillance Mission (NEOSM) that pursues a 2025 launch date for NEOSM. NASA is directed to report to the Committees within 180 days of the enactment of this Act on how the agency is fulfilling its mandate to detect 90 percent of objects greater than 140 meters that threaten Earth, along with development progress of DART and NEOSM.

Asteroid Sample and Advanced Curation Facility.—NASA's investments in the Asteroid Sample and Advanced Curation Facility, as well as the Astromaterials Curation Annex, will allow NASA to properly analyze and curate the variety of samples encountered in the planned Mars Sample Return (MSR) mission. NASA should leverage these investments by engaging the academic community to support sample return missions and make

samples available for research to the worldwide science community.

New Frontiers Missions.—The agreement includes $183,200,000 for New Frontiers missions. Within New Frontiers, $100,000,000 is included for Dragonfly missions. The agreement includes the budget request for Radioisotope Power Systems. Further, the agreement expects NASA to continue the selection and launch cadence of New Frontiers and Discovery class missions in spite of any cost pressures from planetary flagship missions or the Mars program.

Mars Exploration Program.—The House language regarding the Mars Exploration Program is accepted and within these amounts the agreement includes $263,500,000 to further development of an MSR mission to be launched in 2026.

Commercial Deep Space Communications Relay.—Consistent with House direction, within 180 days of enactment of this Act, NASA is directed to submit a report to the Committees outlining the Science plan for securing commercial services for future Mars surface assets. NASA may use fiscal year 2021 funds to procure such services to the extent they are available, scientifically necessary, and can be selected competitively.

Europa Clipper Mission.—The agreement includes $403,500,000 for the Jupiter Europa Clipper mission, modifies House language regarding Clipper, and includes a proviso regarding conditions to be met and directives for the Administrator.

Icy Satellites Surface Technology.—The agreement includes no less than $17,500,000 above the requested level for Icy Satellites Surface Technology.

Science Mission Directorate (SMD) Education.—The agreement provides no less than $45,600,000 for education and outreach efforts. The agreement further supports the recommendation that the Astrophysics program continue to administer this SMD-wide education funding. The agreement encourages SMD-funded investigators to be directly involved in outreach and education efforts and support citizen science. NASA should continue to prioritize funding for ongoing education efforts linked directly to its science missions.

Astrophysics.—The agreement includes $1,356,200,000 for Astrophysics.

Cosmic Origins.—The agreement includes $93,300,000 for the Hubble Space Telescope, $10,000,000 for search for life technology development to leverage and scale technologies developed for the James Webb Space Telescope, and $85,200,000 for the Stratospheric Observatory for Infrared Astronomy (SOFIA).

James Webb Space Telescope (JWST).—The agreement includes $414,700,000 for JWST.

Nancy Grace Roman Space Telescope.—The agreement includes $505,200,000 for the Roman Telescope.

Heliophysics.—The agreement provides $751,000,000 for Heliophysics, including $280,800,000 for Heliophysics Research which includes the request level for Research Range; $148,200,000 for Living with a Star, which includes no less than $25,000,000 for space weather science applications and $15,000,000 above the request for Geospace Dynamics Constellation; $148,600,000 for Solar Terrestrial Probes, which includes funding for the Magnetospheric Multiscale mission at no less than the fiscal year 2020 level and $10,000,000 to begin formulation for the Dynamical Neutral Atmosphere-Ionosphere Coupling mission as a Principal Investigator (PI)-led mission; and $173,400,000 for Heliophysics Explorers. This amount supports the Diversify, Realize, Integrate, Venture, Educate initiative as recommended in the most recent heliophysics decadal survey, as well as science centers and early career researchers. NASA is directed to establish a standalone heliophysics technology program in future budget requests. NASA's space weather science applications program should focus on research and technologies that enable other agencies to dramatically improve operational space weather forecasts and assets, including ground-based assets such as the Daniel K. Inouye Solar Telescope.

Unmanned Aerial Vehicles.—The agreement supports NASA's efforts to develop and refine UAV platforms and encourages continued cooperation from Federal science agencies, including NOAA, to expand utilization and supplement data collection in support of hurricane forecast modeling.

Biological and Physical Science.—The agreement includes $79,100,000 for Biological and Physical Science within Science, with a commensurate reduction in Space Operations.

AERONAUTICS

The agreement includes $828,700,000 for Aeronautics. The agreement supports New Aviation Horizons and is encouraged by NASA's efforts toward developing a Low Boom Flight Demonstrator X-plane, referred to as the Low Boom Flight Demonstrator (LBFD). Appropriate funds are also included to enable the next X-plane demonstration planned beyond LBFD.

University Leadership Initiative.—NASA is expected make additional awards to U.S. universities from the Fiscal Year 2020 solicitation to address additional technical barriers in aeronautics and is encouraged to utilize universities and their capabilities in areas where multidisciplinary convergent research is needed in early stage aeronautics research and technology development.

Hypersonics Technology.—The agreement includes up to $60,000,000 for Hypersonics Technology.

Hypersonics Advanced Materials.—The agreement provides an additional $8,000,000 above the request for collaborative work between industry and academia for development of lower cost advanced three-dimensional carbon/carbon material testing and characterization that will benefit the next generation of very high temperature composites for hypersonic vehicles.

High-Rate Composite Aircraft Manufacturing (HiCAM).—The agreement provides no less than the requested amount for HiCAM and encourages NASA to leverage existing academic and industry expertise to help demonstrate efficient design, development, and certification requirements associated with this program and to utilize no less than 75 percent of these funds to support public-private partnership with at least a 50 percent government cost share.

Subsonic Aircraft Research.—NASA is encouraged to continue research and development in key technologies and innovative aircraft structures and components to enable development of ultra-efficient, sustainable transonic aircraft, including investments in X-planes or other appropriate test platforms.

Advanced Composite Project (ACP).—The agreement encourages NASA to maintain the capabilities and intellectual property structures developed through public-private partnerships within the ACP, provides no less than the fiscal year 2020 funding level for these activities, and expects the activities associated with the ACP to be leveraged across the aeronautics portfolio as part of the fiscal year 2022 request.

Advanced Materials Research.—The agreement provides $7,000,000 above the request level for advanced materials research and encourages NASA to partner with academic institutions that have strong capabilities in aviation, aerospace structures, and materials testing and evaluation for these activities.

Unmanned Traffic Management System (UTM).—NASA is encouraged to continue work with Federal agencies, States, counties, cities, and Tribal jurisdictions on research toward the development of a UTM system that will ensure the broadest level of acceptance from local jurisdictions. Within 60 days of enactment of this Act, NASA shall provide a report to the Committees on Appropriations regarding the agency's future unmanned traffic management UTM airspace requirements, UTM airspace needs, and by extension, the agency's advanced air mobility airspace needs.

UTM Modeling.—The agreement supports NASA's ability to leverage test range airspace, modeling, and simulation from other Federal agencies for UTM and advanced air mobility related activities. NASA should ensure that UTM regional modeling and simulation include electric and hybrid vertical takeoff and landing (VTOL) aircraft and that VTOL aircraft, infrastructure, and airspace meet the needs of rural, suburban, and urban communities.

Cleaner, Quieter Airplanes.—Not later than 180 days after the enactment of this Act, NASA shall submit to the Committees a report on NASA's progress on the development of technologies for quieter, cleaner airplanes, including the ability to transition these technologies to industry.

SPACE TECHNOLOGY

The agreement includes $1,100,000,000 for Space Technology and reaffirms support for the independence of the mission directorate and recognizes that its current status enables it to support the development of a wide array of various technologies.

Regional Economic Development Program.—The agreement includes up to $8,000,000 for the Regional Economic Development Program. NASA is encouraged to expand the program to all 50 states.

On Orbit Servicing and Manufacturing.—The agreement includes up to the requested level for On Orbit Servicing and Manufacturing Demonstration–2.

Restore-L/SPace Infrastructure DExterous Robot (SPIDER).—The agreement provides $227,000,000 for Restore-L/SPIDER.

Nuclear Thermal Propulsion.—The agreement provides not less than $110,000,000 for the development of nuclear thermal propulsion, of which not less than $80,000,000 shall be for the design of test articles that will enable a flight demonstration. Within 180 days of the enactment of this Act, NASA, in conjunction with other relevant Federal departments and agencies, shall submit a multiyear plan that enables technology development leading to an in-space propulsion-system demonstration and describes future missions and propulsion and power systems enabled by this capability.

Solar Electric Propulsion.—The agreement includes the requested level for Solar Electric Propulsion activities.

Additive Manufacturing.—The agreement includes $35,000,000 for additive manufacturing.

Flight Opportunities Program.—The agreement includes no less than $27,000,000 for the Flight Opportunities Program. The funding provided for this program may be used to support undergraduate and graduate work in developing flight opportunities payloads. NASA should ensure that funds are available for flight opportunities of science, technology demonstration, and educational payloads developed across all NASA Mission Directorates, as well as external flight opportunities, as authorized under section 907 of the NASA Authorization Act of 2010 (Public Law 111–267), including competitively-selected opportunities in support of payload development and flight of K–12 and collegiate educational payloads. NASA is directed

to consider how the Flight Opportunities Program may be leveraged to provide expanded opportunities to Science, Technology, Engineering, and Mathematics (STEM) students and early career researchers. The recommendation includes $7,000,000 to support payload development and flight of K–12 and collegiate educational payloads.

Innovative Nanomaterials.—The agreement includes $5,000,000 to advance large scale production and use of innovative nanomaterials, including carbon nanotubes.

On Surface Manufacturing Capabilities.—The agreement provides the budget request for On-Surface Manufacturing and directs NASA, through partnerships with universities, to leverage efforts that complement ongoing work on the development of advanced materials with a focus on point-of-need and in-place generated materials, energy capture and power storage, recycling, commercialization, and workforce development.

Small Business Innovation Research.—NASA shall continue to fulfill statutory obligations for the amount of Small Business Innovation Research (SBIR) and place an increased focus on awarding SBIR awards to firms with fewer than 50 employees.

EXPLORATION

The agreement includes $6,555,400,000 for Exploration and recognizes that the Nation deserves a safe and robust human spaceflight program to explore beyond low-Earth orbit (LEO) and ensure U.S. leadership in space. To support these efforts, the agreement provides funding for NASA to make investments in critical infrastructure that will enable the human exploration of space beyond LEO through the Artemis program and provide flexibility for a variety of mission destinations including the Moon and Mars.

Orion Multi-Purpose Crew Vehicle.—The agreement includes $1,406,700,000 for the Orion Multi-Purpose Crew Vehicle. NASA is further directed to inform Congress of the status of activities related to Orion, the European Service Module, and ongoing activities related to integration of Orion with Space Launch System and associated ground infrastructure.

Space Launch System (SLS).—The agreement provides $2,585,900,000 for SLS, of which $400,000,000 is for concurrent SLS Block 1B Development, including Exploration Upper Stage development and associated stage adapter work. The agreement is supportive of fully developing the capabilities of SLS, and directs NASA to continue the simultaneous development of activities as authorized under sections 302(c)(1)(a) and (b) of Public Law 111–267. The agreement reiterates House language directing NASA to engage an independent reviewer to conduct a review of SLS completion costs. Additionally, not later than 180 days after the enactment of this Act, the agreement directs NASA to submit to the Committees a comprehensive manifest of Space Launch System cargo flights through 2030 which incorporates planned Science missions, such as the Europa Lander mission and outer planet missions to Uranus and Neptune.

Exploration Ground Systems.—In lieu of direction in the House report, the agreement includes $590,000,000 for Exploration Ground Systems.

VAB Construction.—The agreement provides for a transfer of $25,000,000 from Exploration Systems Development to Exploration Construction of Facilities, to fund additional Exploration Ground Systems construction requirements incrementally, consistent with the incremental funding authority provided for Exploration Systems in the FY 2018 Consolidated Appropriations Act (P.L. 115–141), as Exploration Systems programs move from development to production and operations. This transfer will increase funding for the KSC Modifications to Launch Infrastructure for SLS project, to initiate construction of new platforms for Vehicle Assembly Building (VAB) High Bay 3 to enable processing the SLS Block 1B configuration.

Second Mobile Launch Platform (MLP–2).—In lieu of the House report language, the agreement within Exploration Ground Systems includes $74,000,000 for MLP–2.

Exploration Research and Development.—The agreement includes $1,972,800,000 for Exploration Research and Development, and directs that of that amount, $698,800,000 is for Gateway, and $850,000,000 is for the Human Landing System.

Priority of Use Missions.—NASA is directed to continue reporting to the Committees any activities that cause NASA to invoke its ''Priority of Use'' clause, including identifying the conflicting activities between NASA and non-Federal activities, and how the conflict was resolved, 15 days prior to any activity taking place. NASA shall ensure that any non-Federal activities do not interfere with the progress of, and schedule for, the Artemis missions.

Lunar Lander Program Office.—Within the amount provided for the Human Landing System, the agreement includes full funding for the Lunar Lander Program Office.

SPACE OPERATIONS

The agreement provides $3,988,200,000 for Space Operations, including $17,000,000 for commercial low Earth orbit (LEO) development.

Commercial Crew and Cargo Program.—The agreement provides the requested level of funding for Commercial Crew and Cargo, including funds to enable cargo flights for all three current providers within the Commercial Crew and Cargo program.

Biological and Physical Science Research and Applications.—At the request of NASA, the agreement moves the Biological and Physical Science research and applications to the Science Mission Directorate. The agreement supports the full request for ISS Research. However, of the requested amount, $79,100,000 for Biological and Physical Science is provided within the NASA Science account. NASA is directed to continue to support grant opportunities in biological and physical sciences research within a microgravity environment, including continued study of and quantifying potential exposure to cosmic rays through initiatives such as the Alpha Magnetic Spectrometer.

Commercial LEO Development.—The agreement provides $17,000,000 for LEO commercialization to grow promising research across all scientific disciplines and industries. Within 180 days of enactment of this Act, NASA shall provide the Committees the selection criteria used by NASA and other U.S. based entities for selecting projects, a list of the projects selected, the total costs incurred by NASA for delivery and execution of each project, and the amount NASA will be reimbursed for transportation, personnel, and facility use for each project. NASA is also directed to provide the Committees, within 180 days of enactment of this Act, an assessment of the benefits and challenges of using repurposed upper stages as free-flying platforms. NASA shall not use funds provided in this or any other Act to subsidize the cost of any project that is primarily intended for marketing, advertising, or entertainment purposes.

Space Communications.—The proposal to consolidate the Communications Services Program (CSP) under Space Communications and Navigation (SCaN) has created uncertainty about how CSP will be managed. The agreement directs NASA to develop a plan, budget, and timeline for sustainment of the existing network and infrastructure upgrades, as well as delineating responsibilities for the program and explaining how the program goals differ from SCaN. NASA is directed to brief the Committees on the plan within 180 days of enactment of this Act.

SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS ENGAGEMENT

The agreement includes $127,000,000 for Science, Technology, Engineering, and Mathematics Engagement.

Space Grant Program.—The agreement includes $51,000,000 for the Space Grant Program; directs that these amounts be allocated to State consortia for competitively awarded grants in support of local, regional, and national STEM needs; and directs that all 52 participating jurisdictions be supported at no less than $760,000 each.

Established Program to Stimulate Competitive Research (EPSCoR).—The agreement includes $26,000,000 for EPSCoR.

Minority University Research and Education Project (MUREP).—The agreement includes $38,000,000 for MUREP. MUREP is encouraged to support programs that connect science, indigenous culture, and community, including the integration of indigenous practices, at minority-serving higher education institutions, including Alaska Native and Native-Hawaiian Serving Institutions and Tribal Colleges and Universities, in a State or States where the need for such indigenous-academic collaboration is present.

STEM Education and Accountability Projects (SEAP).—The agreement includes $12,000,000 for the SEAP.

Museums and Planetariums.—No less than $5,000,000 is provided for the Competitive Program for Science Museums, Planetariums, and NASA Visitor Centers within SEAP, and NASA is encouraged to follow the program's authorized purpose.

SAFETY, SECURITY AND MISSION SERVICES

The agreement includes $2,936,500,000 for Safety, Security and Mission Services.

IV&V Program.—The agreement directs that within the amounts provided $39,100,000 is for NASA's IV&V Program and, if necessary, NASA is directed to fund additional IV&V activities from within the mission directorates that make use of IV&V services.

Accounting System.—The agreement directs that NASA not implement, alter, or configure any changes to its financial system to accommodate amounts below NASA appropriation account levels. NASA should request such changes, and any associated costs, as part of a future budget request.

Buy American Provisions.—NASA is directed to follow prior year report language included in Senate Report 116–127 and adopted by Public Law 116–93 regarding Buy American provisions related to marine vessels and marine vessel components.

Diversity and Inclusion.—NASA is encouraged to take steps to promote racial and cultural acceptance and diversity within its workforce. Within 180 days of enactment of this Act, NASA is directed to submit a report analyzing the current racial and cultural makeup of the agency; planned efforts to recruit, retain, and advance applicants and employees critical to promoting greater racial and cultural diversity, and the outcomes of these efforts; and any additional steps and recommendations planned to promote greater racial and cultural acceptance and diversity throughout the NASA workforce, including the development and analysis of metrics to evaluate success.

CONSTRUCTION AND ENVIRONMENTAL COMPLIANCE AND RESTORATION

The agreement includes $390,278,000 for Construction and Environmental Compliance

and Restoration (CECR). The agreement also includes the request for Construction of Facilities for Science, Exploration, and Space Operations.

OFFICE OF INSPECTOR GENERAL

The agreement includes $44,200,000 for the Office of Inspector General.

ADMINISTRATIVE PROVISIONS

(INCLUDING TRANSFERS OF FUNDS)

NASA is directed to provide any notification under section 20144(h)(4) of title 52, United States Code, to the Committees.

The agreement also permits a transfer of funds from Exploration to Construction.

Not more than 20 percent or $50,000,000, whichever is less, of the amounts made available in the current-year CECR appropriation may be applied to CECR projects funded under previous years' appropriation acts. Use of current-year funds under this provision shall be treated as a reprogramming of funds under section 505 of this Act and shall not be available for obligation except in compliance with the procedures set forth in that section.

NATIONAL SCIENCE FOUNDATION

The agreement includes $8,486,759,000 for the National Science Foundation (NSF).

Arecibo Observatory (AO).—The significant loss caused by the collapse of the 305–meter radio telescope at the Arecibo Observatory in Arecibo, Puerto Rico, is devastating. During its 57 years in operation, the telescope was an integral part of U.S. capabilities to advance scientific research and served as an iconic, beloved site for the residents of Puerto Rico and the scientific community. With this in mind and keeping safety as the number one priority, NSF is directed to report to the Committees within 60 days of enactment of this Act on the causes and extent of the damage, the plan to remove debris in a safe and environmentally sound way, the preservation of the associated AO facilities and surrounding areas, and the process for determining whether to establish comparable technology at the site, along with any associated cost estimates. NSF shall keep the Committees informed of any other activities related to this facility.

Innovation Corps.—The agreement includes $40,000,000 for the Innovation Corps program. NSF is encouraged to facilitate greater participation in the program from academic institutions in States that have not previously received awards.

Student Diversity and Success Research.—The agreement adopts House language regarding Historically Black Colleges and Universities (HBCU) Student Diversity and Success Research and expands it to encourage NSF to support the listed activities at Hispanic Serving Institutions, Alaska Native Serving Institutions, Native-Hawaiian Serving Institutions, and Tribal Colleges and Universities and to direct NSF to include these types of institutions in the required report, in addition to HBCUs.

RESEARCH AND RELATED ACTIVITIES

The agreement includes $6,909,769,000 for Research and Related Activities (R&RA) and no less than $200,000,000 for EPSCoR.

Within the amount provided for R&RA, the agreement provides for the Facility Operation Transition activity at the budget request level, operation of the National Ecological Observatory Network at no less than the fiscal year 2020 level, and the Center for High Energy X-Ray Science at no less than the budget request level.

Maintaining Core Research.—NSF shall maintain its core research at levels not less than those provided in fiscal year 2020, including supporting existing observational networks and research infrastructure, including astronomy facilities, the academic research fleet, federally funded research and development centers and the national high-performance computing centers.

Daniel K. Inouye Solar Telescope (DKI–ST).—The agreement supports the budget request for the Daniel K. Inouye Solar Telescope (DKI–ST). NSF is encouraged to support the existing ancillary academic partnerships between NSF and DKI–ST.

Green Bank Observatory (GBO).—The agreement supports NSF's effort to develop multi-agency plans at GBO and provides no less than the request level to support operations and maintenance at GBO through multi-agency plans, or directly through the Foundation.

Navigating the New Arctic.—The Committee urges NSF to formulate Arctic research programs leveraging expertise from regions accustomed to changing marine ecosystems. Specifically, NSF is encouraged to consider the impact of the opening of the two trans-Arctic sea routes and the proximity to deep U.S. ports.

Online Influence.—NSF is encouraged to consider additional research efforts that will help counter influence from foreign adversaries on social media platforms designed to influence U.S. perspectives and undermine confidence in U.S. elections and institutions. To the extent practicable, NSF should engage other Federal agencies to help identify areas of research that will provide insight that can mitigate adversarial online influence.

U.S. Neutron Monitor Network.—NSF is directed to immediately submit the U.S. Neutron Monitor Network plan required under Senate Report 116–127, as adopted in Public Law 116–93.

Study of Temperate Woodland and Alpine Ecosystems and Ecoregions.—NSF is expected to continue supporting research on unique mountain temperate woodland ecosystems and ecoregions, in order to better understand and sustain the health and vitality of mountain ecosystems.

Spectrum Innovation Initiative.—The agreement supports investments in the Spectrum Innovation Initiative.

Water Contamination Research.—From fiscal year 2014 to present, NSF has obligated more than $30,000,000 to research related to the water crisis in Flint, Michigan, or closely related subjects. NSF is encouraged to continue multi-institutional, multidisciplinary water-related research.

Rules of Life.—The agreement supports NSF's focus on Rules of Life funding of research, including in plant genomics, and directs NSF to continue to advance the ongoing plant genomics research program, further its work in crop-based genomics research, and to maintain a focus on research related to crops of economic importance.

Verification of the Origins of Rotation in Tornadoes Experiment-Southeast (VORTEX–SE).—NSF is encouraged to continue its cooperation with NOAA for the VORTEX-SE field campaign in the southeastern United States. NSF should look beyond its traditional research disciplines to utilize programs, co-funding opportunities, and to utilize collaborative research to better understand the fundamental natural processes of tornadoes and to improve models of these seasonal extreme events.

High-Performance Computing Planning.—NSF should invest in additional high-performance computational systems and renew and adequately resource its commitment to developing and supporting systems that facilitate tremendous leaps in computational simulation.

Intense, Ultrafast Lasers.—In 2018, the National Academy of Sciences found that the United States has lost its previous dominance in high-intensity lasers, which are critical to advance scientific discovery, future science facilities, and important applications in national security, industry, and medicine. NSF is encouraged to implement report recommendations and to make the necessary early stage investments in intense, ultrafast laser science and technology.

Marine Research.—NSF is to maintain current funding levels for marine research facilities. A plan shall be developed by NSF with the scientific community to continue researcher access to marine research facilities and to accept new research proposals.

Re-Engineering Plastic Textiles.—NSF is encouraged to take a comprehensive and coordinated approach to support research in plastics, microplastics, and microfibers to address the significant challenges on the aquatic environment, to human health, and in the transport and migration of materials, waste management, and development of alternative materials.

Coastlines and People.—NSF is encouraged to continue to advance research in coastal environmental viability and natural hazards in coastal regions, including the efforts of the Coastlines and People program.

Quantum Information Science.—The agreement includes funds up to the request levels for quantum information science research and from within this amount provides no less than $160,000,000 for activities authorized under section 301 of the National Quantum Initiative Act and $50,000,000 for National Quantum Information Science Research Centers, as authorized in section 302 of that Act.

Artificial Intelligence (AI).—This agreement fully funds AI related grants and interdisciplinary research initiatives across NSF at up to the fiscal year 2021 request level. In addition, the agreement reiterates House language to encourage NSF to continue its efforts in workforce development for AI and other emerging technologies, with focused outreach to community colleges, Historically Black Colleges and Universities, Hispanic Serving Institutions, Tribal Colleges and Universities and other Minority Serving Institutions.

Sustainable Chemistry Research.—NSF is encouraged to develop and implement a sustainable chemistry research and development program, as authorized by the America Competes Reauthorization Act of 2010 (Public Law 111– 358). Additionally, NSF shall report to the Committees within 90 days after the enactment of this Act on its implementation plan for this program.

MAJOR RESEARCH EQUIPMENT AND FACILITIES CONSTRUCTION

The agreement includes $241,000,000 for Major Research Equipment and Facilities Construction (MREFC), including funds at the requested levels for the continued construction of the Vera C. Rubin Observatory (previously known as the Large Synoptic Survey Telescope), the Antarctic Infrastructure Modernization for Science, and the High Luminosity-Large Hadron Collider Upgrade. The Government Accountability Office is directed to continue its annual reviews and semiannual updates of programs funded within MREFC and shall report to Congress on the status of large-scale NSF projects and activities based on its review of this information.

Mid-scale Research Infrastructure.—The agreement includes $76,250,000 for Mid-scale research infrastructure. NSF is encouraged to award at least one mid-scale research infrastructure project led by an institution in an EPSCoR State.

Infrastructure Planning.—Under 42 U.S.C 18621, the NSF Director is required to prepare, and include as part of the Foundation's annual budget request to Congress, a plan for the proposed construction of, and repair and