

National Aeronautics and
Space Administration
Office of the Administrator
Washington, DC 20546-0001



February 5, 2013

The Honorable Barbara A. Mikulski
Chairwoman
Committee on Appropriations
United States Senate
Washington, DC 20510

Dear Chairwoman:

This is in response to your letter of January 18, 2013, requesting information about the potential impacts of the March 1, 2013, sequestration on NASA. Our response articulates impacts of sequestration relative to the President's FY 2013 budget request for NASA of \$17.711.4 million in direct discretionary funding. NASA estimates that a March 1 sequester applied to the annualized levels in the current FY 2013 Continuing Appropriations Resolution (Section 101, P. L. 112-175) would reduce the total NASA funding level to \$16.984.7 million in direct discretionary funding, or \$726.7 million less than the President's FY 2013 budget request, and \$894.1 million less than the annualized levels in the current FY 2013 Continuing Appropriations Resolution.

Overall, for purposes of this assessment, the Agency assumed that the FY 2013 Continuing Resolution, with all of its terms and conditions, would be extended from March 27 to September 30, 2013, and that the sequester would cancel 5.0 percent of the full-year amount, which would be the equivalent of roughly a 9 percent reduction over the remaining seven months of the fiscal year. NASA's assessment of the impacts of a March 1 sequester is presented in the enclosure.

I would be pleased to discuss this information with you in greater detail if you wish.

Sincerely,

A handwritten signature in black ink, appearing to read "C. Bolden, Jr.", with a long horizontal stroke extending to the right.

Charles F. Bolden, Jr.
Administrator

Enclosure

Impacts of March 1, 2013, Sequester on FY 2013 President's Budget Request for NASA

Science (President budget request: \$4,911.2 million; -\$51.1 million sequester impact to FY 2013 budget request)

Sequestration would reduce Science by \$51.1 million below the FY 2013 budget request, which would cause NASA to have to take such steps as:

- Reducing funding for new Explorer and Earth Venture Class mission selections by 10 to 15 percent, resulting in lower funding levels for new activities and causing minor launch delays, and
- Reducing funding available for competed research (e.g., "research and analysis") projects by about 2 percent, resulting in about a 5 percent reduction in new awards to support labor/jobs at universities, businesses, and other research entities distributed around the nation this year. Ongoing projects started with awards made prior to this fiscal year would not be affected.

Aeronautics (President budget request: \$551.5 million; -\$7.3 million sequester impact to FY 2013 budget request)

Sequestration would reduce Aeronautics by \$7.3 million below the FY 2013 budget request. The Aeronautics Mission Directorate would need to take cuts to areas such as funding for facilities maintenance and support; air traffic management concept development; systems analysis conducted with the Joint Planning and Development Office; research into safety for vehicle and systems technologies; and research into civil tilt-rotor technologies. These reductions would decrease or delay NASA's ability to develop technologies necessary to enable next generation air traffic management and to ensure needed safety levels. The reductions would also negatively impact NASA's ability to maintain and operate national asset level test facilities to support the related R&D efforts, and would lead to cancellations of ongoing partnerships.

Space Technology (President's budget request: \$699.0 million; -\$149.4 million sequester impact to FY 2013 budget request)

Sequestration would reduce Space Technology by \$149.4 million below the FY 2013 budget request. At that funding level, the Space Technology Mission Directorate cannot maintain its technology portfolio as several projects underway require increased funding in FY 2013 to proceed. Thus NASA would likely have to cancel one of these projects or be able to offer no new awards for programs that vary in scope from research grants, to public-private

partnerships, to in-space demonstrations during FY 2013. NASA would also consider the following:

- Canceling 6 technology development projects, including work in deep space optical communications, advanced radiation protection, nuclear systems, deployable aeroshell concepts, hypersonic inflatable Earth reentry test, and autonomous systems. In addition, the program would consider delaying an additional 9 projects.
- Canceling several flight demonstration projects in development, including the Deep Space Atomic Clock, Cryogenic Propellant Storage and Transfer and the Materials on International Space Station Experiment-X projects.
- Elimination or de-scoping of annual solicitations for Space Technology Research Grants (STRG), NASA Innovative Advanced Concept (NIAC), and the Small Spacecraft Technology (SST) Program.
- Reduction in the number of Flight Opportunity program flights and payloads that could be flown in FY 2013 and beyond.
- Elimination of Centennial Challenges funding to perform new prizes.

Exploration (President's budget request: \$3,932.8 million; -\$332.2 million sequester impact to the FY 2013 budget request)ⁱ

Sequestration would reduce Commercial Space Flight funding by \$441.6 million below the FY 2013 budget request. After sequestration, NASA would not be able to fund milestones planned to be allocated in the fourth quarter of FY 2013 for Commercial Crew Integrated Capability (CCiCap) such as the SpaceX Inflight Abort Test Review, the Boeing Orbital Maneuvering and Attitude Control Engine Development Test, and the Sierra Nevada Corporation Integrated System Safety Analysis Review #2. Overall availability of commercial crew transportation services would be significantly delayed, thereby extending our reliance on foreign providers for crew transportation to the International Space Station.

The sequester would also reduce Exploration Research and Development funding by \$45.5 million below the FY 2013 budget request. For Advanced Exploration Systems, the sequester would delay procurement of critical capabilities required for the next phase of Human Space Exploration. In the Human Research Program (HRP), national research solicitations/selections would be canceled, with the largest impact likely being at the Johnson Space Center. Additionally, reduced resources for the HRP would likely result in reduced funding to the National Space Biomedical Research Institute and delay NASA Space Radiation Laboratory upgrades.

Construction and Environmental Compliance and Restoration (CECR) (President's budget request: \$619.2 million; -\$251.7 million sequester impact from FY 2013 budget request)ⁱⁱ

For the Construction of Facilities (CoF) program, the \$227.8 million sequester impact would adversely impact the infrastructure needed for NASA's Space Launch System (SLS), Orion Multi-Purpose Crew Vehicle, Launch Services, Rocket Propulsion Test, 21st Century Launch Complex, Commercial Crew and Cargo, and Space Communications and Navigation (SCaN) programs.

- o Sequestration would leave NASA with almost no funds for Programmatic CoF.
- o Sequestration would cancel many institutional construction projects that would repair, refurbish, or replace critical infrastructure that supports NASA's mission. These projects are required to repair NASA's rapidly deteriorating infrastructure in order to protect NASA employees and meet Mission requirements. For Institutional CoF, projects are likely to be cancelled at the following locations:
 - o Glenn Research Center
 - o Goddard Space Flight Center/ Wallops Flight Facility
 - o Jet Propulsion Laboratory
 - o Johnson Space Center
 - o Kennedy Space Center
 - o Langley Research Center
 - o Marshall Space Flight Center

For the Environmental Compliance and Restoration program, the \$23.9 million sequester impact would result in numerous delays to projects requiring re-negotiation of agreed upon compliance dates, with the potential for the imposition of fines for non-compliance. The most pronounced impacts would likely occur at the Santa Susana Field Lab, Kennedy Space Center, and White Sands Test Facility.

Office of the Inspector General (President's budget request: \$37.0 million; -\$0.4 million sequester impact from FY 2013 budget request)

Sequestration would reduce the Office of Inspector General by \$0.4 million, which would reduce future hiring and mean that some critical positions are not back-filled. These impacts would likely result in fewer audits and investigations.

ⁱ The Agency is currently operating under a Continuing Resolution operating plan under which \$53 million was transferred from the Exploration account to the Space Operations account (\$3 million) and the Construction and Environmental Compliance and Restoration account (\$50 million). The effect of \$53 million in transfers from Exploration to other accounts under the Agency's CR operating plan is not included in this description.

ⁱⁱ The effect of a \$50 million transfer from Exploration to CECR Exploration CoF is not included in this description.