



# Legislative Update: FY12 Funding for NSF, NASA, and NOAA

The U.S. Senate Committee on Appropriations has finally taken long-awaited action on the FY 2012 Commerce, Justice, Science, and Related Agencies (CJS) Appropriations bill. The bill, which provides funding for a variety of Federal agencies, including the National Science Foundation (NSF), National Aeronautics and Space Administration (NASA), and National Oceanic and Atmospheric Administration (NOAA), was passed by the Senate CJS Subcommittee on September 15, and the full Senate Appropriations Committee followed suit the next day. This recent progress comes more than two months after the House Appropriations Committee signed off on its own version of the bill on July 13.

Now, the full House and full Senate must act on the bills passed by their respective committees; once (or perhaps, *if*) that occurs, both will be sent to a joint House-Senate “conference,” where differences between the two will be ironed out. The resulting compromise bill would be sent back to both chambers for final approval, then to the President for his signature.

Here is a detailed breakdown of how each of the aforementioned agencies have fared thus far in the appropriations process...

## National Science Foundation

	FY 2011	FY 2012 Request	House Cmte.	Senate Cmte.
<b>NSF</b>	6,859.9	7,767	6,859.9	6,698.1
<b>R&amp;RA</b>	5,563.9	6,253.5	5,606.9	5,443
<b>MREFC</b>	117.1	224.7	100	117.1
<b>AOAM</b>	299.4	357.7	299.4	290.4
<b>OIG</b>	14	15	14	14.2
<b>NSB</b>	4.5	4.8	4.5	4.4
<b>EHR</b>	861	911.2	835	829
<b>DRL</b>	260	264.1	n/a	n/a
<b>ISE</b>	65.9	68.1	n/a	n/a

(in millions of dollars; numbers are rounded)

Generally speaking, the National Science Foundation did well under the President’s budget request for fiscal year 2012; the agency would receive \$7.767 billion, a significant, \$907 million increase over the \$6.859.9 billion appropriated for FY 2011. All agency directorates and lead offices, including Research and Related Activities (R&RA), Major Research Equipment and Facilities Construction (MREFC), Education and Human Resources (EHR), Agency Operations and Award Management (AOAM), Office of the National Science Board (NSB), and Office of Inspector General (OIG) would see increases as well. Like the directorate and division that oversee it, the Informal Science Education (ISE) program would receive additional funding for FY 2012, moving from \$65.9 million in FY 2011 to \$68.14 million in FY 2012—a \$2.29 million (3.2%) increase—under the request.

Unfortunately, neither the House nor the Senate Appropriations Committees met the President’s requested levels in the CJS bills they passed. In comparing the Committee marks with the FY 11 levels, the House provided increased funding for R&RA and level-funding for AOAM, OIG, NSB, and the agency as a whole; decreases were proposed for MREFC and EHR. The Senate numbers look even worse, with decreases proposed for the agency overall and all directorates except for MREFC, where level-funding is proposed. The OIG would see a slight increase.

In the report accompanying the House Appropriations Committee’s version of the bill, the following language is worth noting:

*Best practices in K-12 STEM education—At NSF’s request, the NRC has recently completed a multiday workshop on best practices in K-12 STEM education. The results of this workshop, along with commissioned research and other sources, have been synthesized into an NRC Report, “Successful K-12 STEM Education: Identifying Effective Approaches in Science, Technology, Engineering, and Mathematics,” that discusses best practices and provides a series of recommendations aimed at education policymakers and practitioners. Consistent with the current dissemination plan, NSF shall ensure that this report is widely distributed within the educational and scientific communities.*

*In addition, NSF is directed to being work to identify methods for tracking and evaluating the implementation of the improvements identified in the NRC’s report. These methods may include, but are not limited to, expansion and alignment of existing databases on student outcomes and school and classroom conditions, and the development of measures that more broadly capture desired student outcomes in STEM. NSF and its collaborators should provide and evaluation plan within 12 months of the enactment of this Act that describes these methods and recommends the necessary steps that should be taken by NSF and other Federal agencies to implement that plan.*

*Duplication of effort—The Committee encourages NSF to continue cooperating with ongoing reviews by GAO and OSTP to identify and minimize duplication of effort with other Federal agencies on STEM education.*

Similarly, in the report accompanying the Senate Appropriations Committee’s version of the bill, the following language stands out:

*Creating a strong science and engineering workforce for the future is vital to maintaining the Nation’s competitive edge. As the National Academies report “Rising Above the Gathering Storm” and, before that, the Hart-Rudman report on “Road Map for National Security: Imperative for Change” so illustratively point out, the future of U.S. competitiveness rests on our ability to train the next generation of scientists and engineers.*

*Informal Science Education—The Committee maintains its strong support for NSF’s informal science education program. A report from the National Academy of Sciences, “Learning Science in Informal Settings,” found evidence that nonschool science programs involving exhibitions, media projects, emerging learning technologies, and other informal education programs stimulate students and increase their interest in STEM education. The Committee encourages NSF to increase its support for the development of online accessible repositories of digital media and other materials to assist teachers and students in STEM education.*

**National Aeronautics and Space Administration**

	<b>FY 2011</b>	<b>FY 2012 Request</b>	<b>House Cmte.</b>	<b>Senate Cmte.</b>
<b>NASA</b>	18,448	18,724.3	16,810.3	17,938.8
<b>Education</b>	145.8	138.4	138	138.4
<b>STEM Ed. Acct.</b>	n/a	66.4	n/a	22.3
<b>Inf. STEM Ed.</b>	n/a	n/a	n/a	0
<b>Sci. Mus. Grants</b>	n/a	0	n/a	7
<b>NASA Vis. Cntrs.</b>	n/a	0	n/a	10

(in millions of dollars; numbers are rounded)

Like NSF, NASA fared well (relatively speaking) under the President’s budget request. If enacted, the agency would receive \$18.724 billion for FY 12, \$276 million more than the FY 11 enacted level. Of that amount, \$138.4 million would be provided for education programs, \$7.4 million less than the \$145.8 available for FY 11. Line items for a number of specific NASA education programs were not included in the request, though funding for formal and informal opportunities were envisioned as part of a broader “STEM Education and Accountability Projects” account that would

see \$64.4 million in funding.

While the House and Senate Committees did not meet the President's request for the agency overall, they did provide the requested \$138 million in funding for education programs. Of the amount provided by the Senate, \$22.3 million was set aside for the aforementioned "STEM Education and Accountability Projects," \$7 million was set aside for grants for science museums and planetariums, and \$10 million was set aside for NASA Visitor Centers. The House was not as specific regarding how the bulk of the \$138 million it provided for education should be allocated, though \$35.9 million was provided for NASA Space Grant and the Experimental Program to Stimulate Competitive Research (EPSCoR).

The House Appropriations Committee included the following language in the report that accompanies its CJS bill:

*Duplication of effort—GAO recently determined that STEM education is an area of government activity at high risk of programmatic duplication and inefficiency due to the large number of agencies working on similar tasks. The Committee encourages NASA to continue cooperating with follow-up reviews by GAO and OSTP to identify and minimize all areas of duplication with other agencies. NASA should also continue pursuing enhanced strategic coordination within NASA itself (between education program officials at Headquarters, in the mission directorates and at the centers) in order to eliminate any intra-agency duplication of effort. By maintaining a focus on unique, value-added programs and promoting management efficiency, NASA can continue to achieve its education goals despite a slight reduction in the Education funding level.*

The following language taken from the Senate Appropriations Committee's CJS report is also noteworthy:

*The amount available for the Education account has declined 23 percent since fiscal year 2010, as Congress has accepted NASA's proposed levels for this account. Once again in fiscal year 2012, NASA proposes a fundamental reorientation of its education program based on the Education Design Team's findings. However, in developing its budget, NASA has ignored successful programs like Space Grant and the Experimental Program to Stimulate Competitive Research [EPSCoR] that give students across the Nation access to NASA resources. NASA has also ignored local efforts to expand the reach and effectiveness of its visitors centers which serve as gateways for students and teachers. In developing future budgets, the Committee directs NASA to utilize these existing and proven tools.*

*In addition to funds provided within the Education account, each mission directorate utilizes funding for education activities. However, NASA has been unable to provide an adequate, full accounting of those activities Agency-wide. Therefore it is impossible for the Committee to know the extent and value of the Agency's STEM education efforts. The Committee therefore directs NASA to include in its annual budget justifications the amount within each mission directorate that will be expended for education activities and the specific purposes for which those funds will be expended.*

*Educational Activities at NASA Centers—The Committee provides \$10,000,000 for the development of educational activities at NASA's centers and directs NASA to distribute this amount in equal amounts to each center's official visitor center for the development of STEM educational activities, including exhibits, without assessing any administrative charges.*

*Informal Education Grants—A report by the National Academy of Sciences, "Learning Science in Informal Settings," found evidence that nonschool science programs involving exhibits, media projects, emerging learning technologies and other informal education programs increase students' interest in STEM education. The Committee recommends \$7,000,000 for a competitive grant program as authorized by section 616 of Public Law 109-155.*

## National Oceanic and Atmospheric Administration

	<b>FY 2011</b>	<b>FY 2012 Request</b>	<b>House Cmte.</b>	<b>Senate Cmte.</b>
<b>NOAA</b>	4,588	5,497.7	4,533.1	5,000
<b>Program Support</b>	286.2	295.5	383.5	432
<b>Office of Ed.</b>	45.8	38.7	n/a	31.5
<b>Comp. Ed. Grants</b>	25	20.8	26.89	8.04
<b>Env. Lit. Grants</b>	n/a	5	n/a	n/a

(in millions of dollars; numbers are rounded)

Like their counterparts at other scientific agencies, NOAA would see an increase in its overall funding under the President's FY 12 budget request; the \$5.497 billion requested would be \$909 million above the FY 11 level. Decreases are proposed, however, for the Office of Education and several programs contained therein.

The House Appropriations Committee's mark, while falling short of the President's request, is comparable to the FY 11 level for the agency overall, as well as its Competitive Educational Grants and Programs account. Their Senate counterparts provided more funding for the agency overall (\$5 billion), while offering \$8.04 million for Competitive Educational Grants.

The House Appropriations Committee included the following language along with its version of the CJS bill:

*NOAA Education Program—The Committee recommends \$26,884,000 for NOAA's Competitive Educational Grants and Programs, which is \$1,934,000 above fiscal year 2011. The Committee encourages NOAA, within available funds, to expand science, technology, engineering, and mathematics programs for middle school youth as appropriate.*

The Senate Appropriations Committee included this language in its FY 12 CJS Appropriations bill:

*Education—Within the funds provided for NOAA's Education Program, \$8,040,000 is for competitive educational grants, of which \$2,500,000 is to continue the ocean education partnerships and \$2,000,000 is to improve geographic literacy in our Nation's schools by utilizing NOAA's national network of weather and environmental activities; \$14,300,000 is for the educational partnership program with minority serving institutions; and a total of \$7,200,000 is provided for Bay-Watershed Education and Training regional programs.*