

Congress Boosts NOAA, NIST R&D

(This analysis is part of a series of AAAS R&D Funding Updates on the FY 2001 congressional appropriations process. This analysis includes information on R&D in final FY 2001 Department of Commerce appropriations. The complete series of AAAS R&D Funding Updates, including continually updated analyses of R&D by agency in FY 2001 appropriations, is available on the AAAS R&D Web Site (<http://www.aaas.org/spp/R&D>) in the "FY 2001 R&D" or the "What's New" sections.)

On October 27, Congress gave final approval to an FY 2001 Commerce-Justice appropriations bill (HR 4942) that gives substantial increases to most R&D programs in the Department of Commerce. **Although the Department's total R&D rises only modestly by 3.5 percent or \$38 million to \$1.1 billion, Commerce's main R&D programs in the National Oceanic and Atmospheric Administration (NOAA) and the National Institute of Standards and Technology (NIST) receive substantial increases**, offset by a planned reduction in R&D facilities construction (see Table). Congress delayed sending the bill to President Clinton until after negotiations on the remaining appropriations bills were complete, and so the President did not sign the bill into law until December 21. The same day, he signed into law another appropriations bill that contains a 0.22 percent across-the-board reduction for most discretionary programs, including R&D in Commerce. All figures in this analysis have been adjusted to reflect this cut.

The Commerce-Justice bill is a leading example of the chaos and confusion that surrounded the congressional attempt to finish up FY 2001 appropriations. Although the House drafted and approved its version of the Commerce-Justice bill in June, the Senate never approved its own draft version. Because the Senate had not approved its version, a formal House-Senate conference could not be convened. In October, however, appropriators completed an informal conference agreement and then attached it to the conference report for the District of Columbia appropriations bill. The House and Senate quickly approved the combined conference report on October 27, but delayed sending it to the President because he had threatened a veto. The President had threatened a veto not because of any disagreements over what is in the bill but rather with what is *not*: the final bill does not contain legislation he wanted extending amnesty for certain illegal immigrants from Latin American nations. Thus, although the final Commerce-Justice bill contained substantial increases for most Commerce programs, the bill languished until December, when the immigration disputes were finally resolved in another bill. President Clinton finally signed the bill on December 21.

The final Commerce-Justice bill offers less for R&D than the President requested, but more than the House and Senate had proposed earlier in the appropriations process. While the President requested \$1.1 billion for Commerce R&D, including large increases for NIST programs, the House voted to slash Commerce R&D by nearly 25 percent down to \$816 million, while the Senate proposed to cut 2.7 percent off the FY 2000 funding level for a total of \$1.0 billion. The final appropriation of \$1.1 billion, an increase of 3.5 percent over FY 2000, exceeds the earlier House and Senate-proposed funding levels but falls \$37 million short of the request. This matches the pattern of other conference reports, which have generally provided far more than either the House or Senate bills, and in many cases more than the President's request. (For details of House appropriations for Commerce, please see the June 16 AAAS R&D Funding Update; for details of Senate appropriations, please see the July 26 AAAS R&D Funding Update.)

The final bill provides \$419 million for **National Institute of Standards and Technology (NIST)** R&D, far more than the \$270 million House appropriation, though less than the request for \$497 million. The overall total declines 8.5 percent because NIST's Construction of Research Facilities program declines from \$107 million down to \$35 million. NIST itself only requested \$36 million for FY 2001 because most of the FY 2000 funding was a one-time appropriation to fund the construction of a new Advanced Measurement Laboratory (AML) at NIST headquarters in Maryland. The final bill provides most of the request, but diverts \$14 million for

congressionally designated projects not in the NIST request. **Neither the House, the Senate, nor the final bill provide funds for a proposed Institute for Information Infrastructure Protection (IIIP)**, in contrast to the request for \$50 million out of which \$44 million would have funded R&D. IIIP would have supported research and technology development to protect critical information and telecommunications infrastructures from attack or other failures. IIIP would have fostered partnerships between industry, universities, and government through competitively awarded research grants, mostly to external performers. Instead, the final bill allocates \$5 million within NIST's intramural research account for infrastructure protection research.

Other NIST programs, however, receive substantial increases in funding. NIST intramural laboratory research programs grow by 8.8 percent to \$257 million for R&D in the Measurement and Standards Laboratories, part of the Scientific and Technical Research and Services (STRS) account. (This total excludes the \$5 million provided for infrastructure protection research.) R&D in the **Advanced Technology Program (ATP)** also grows, by \$8 million or 6.8 percent to \$123 million. While this appropriation falls short of the request, it is far better than the House version of the bill, which would have eliminated the program. ATP is NIST's extramural research grants program to provide precompetitive cost-shared R&D support for promising market technologies. The House has repeatedly voted to terminate the program, including in last year's Commerce-Justice bill, but the Senate and the Clinton Administration have managed to preserve it in past budget struggles, a pattern that is repeated this year.

The total NIST budget in the final bill is \$597 million (for both R&D and non-R&D programs), down 6.1 percent from FY 2000, but an increase after taking out the Construction of R&D Facilities account.

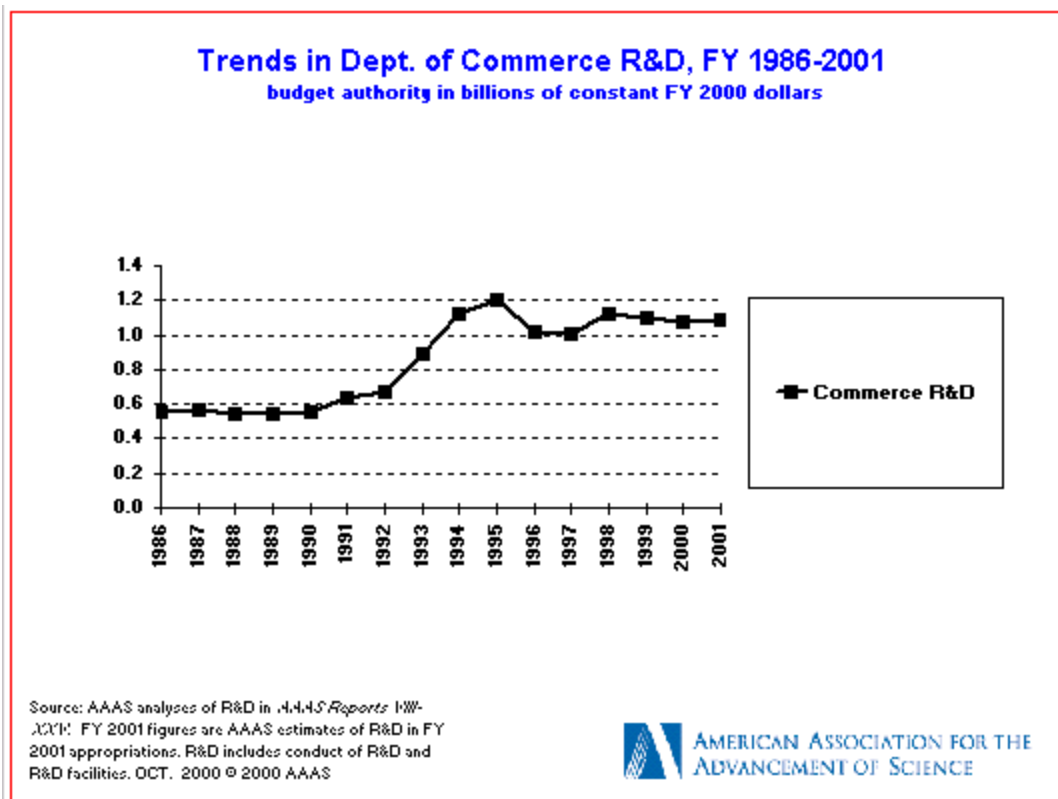


Figure 1.

The final bill boosts funding for the **National Oceanic and Atmospheric Administration (NOAA)**'s R&D programs with an R&D appropriation of \$638 million in FY 2001, an increase of \$47 million or 8.0 percent over FY 2000. The bill boosts funding for NOAA's main R&D account, Oceanic and Atmospheric Research

(OAR), from \$301 million in FY 2000 to \$323 million. Included is a boost in Climate and Air Quality Research from \$130 million to \$144 million.

The National Telecommunications and Information Administration (NTIA) within Commerce increases its support of R&D from \$20 million to \$49 million in FY 2001. In addition to its support for telecommunications sciences research, NTIA nearly triples its support of Technology Opportunity Grants from \$16 million to \$46 million. These grants fund the development of innovative information technology systems to provide the benefits of information technology to Americans in under-served communities.

The FY 2001 increase, after adjusting for expected inflation, keeps Commerce R&D at a stable funding level. Mostly because of strong Clinton Administration support for NIST programs, and secondarily because of bipartisan support for NOAA's R&D programs in the early 1990s, Commerce R&D in FY 2001 is nearly double the funding level of a decade ago (in inflation-adjusted terms; see Figure 1). Commerce is now one of seven agencies to fund more than \$1 billion in R&D annually. However, Commerce R&D peaked in FY 1995 and has been up and down since then because partisan disagreements on the proper role of the federal government in commercial technology have made ATP a contentious political issue, because Republican hostility toward some environmental R&D programs have resulted in cuts to NOAA, and because tight discretionary spending caps have limited the pool of money available for both NIST and NOAA. Even though other R&D funding agencies have benefited in the past few years from additional resources made available because of budget surpluses, Commerce R&D has actually declined slightly since FY 1998, the first year of the current string of surpluses.

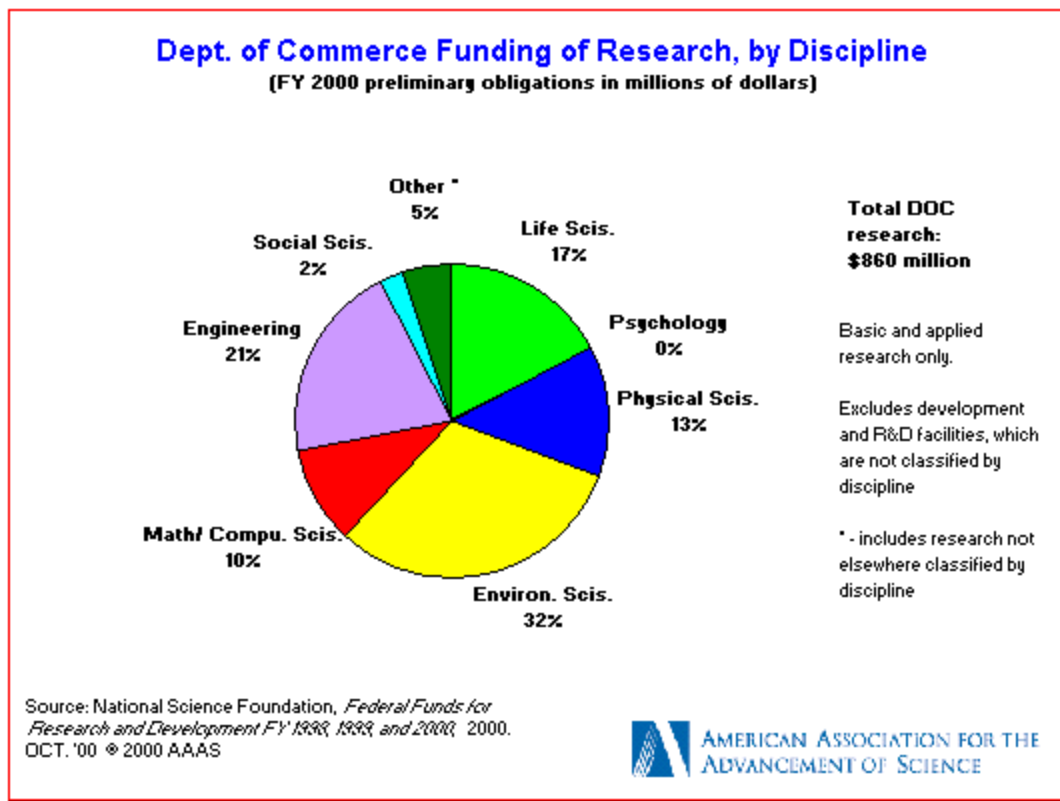


Figure 2.

Because of the differing missions of NOAA and NIST, Commerce has a diverse research portfolio, as shown in Figure 2. Although Commerce is not the dominant supporter of research in any one discipline, it does provide significant amounts of research funding for several disciplines. NOAA is a leading supporter of research in the life sciences and especially the environmental sciences, including atmospheric and

oceanographic research. NIST is a leading supporter of research in the physical sciences (including chemistry and physics), computer sciences, and the engineering sciences. Most of NOAA's and NIST's research is performed in intramural laboratories.

Commerce funding for many of these disciplines has stagnated or declined in recent years because of continuing disputes over the proper role of NIST in funding R&D and up-and-down funding for NOAA. The trends in Commerce's total R&D budget are mirrored in trends for Commerce support of specific disciplines, as shown in Figure 3. NOAA's support of environmental sciences and life sciences has declined in tandem with losses in purchasing power in NOAA's overall R&D budget, although funding levels are somewhat higher than they were in the early 1990s. NIST dramatically expanded its support of engineering, physical sciences, and computer sciences research in the early 1990s after ATP started. But since 1995, when the Republican Congress began casting a harshly critical eye to NIST's activities (especially ATP), its support of these disciplines has stagnated or declined. The increase in Commerce's R&D in FY 2001 should reverse these downward trends somewhat, although funding levels will remain well below their peaks.

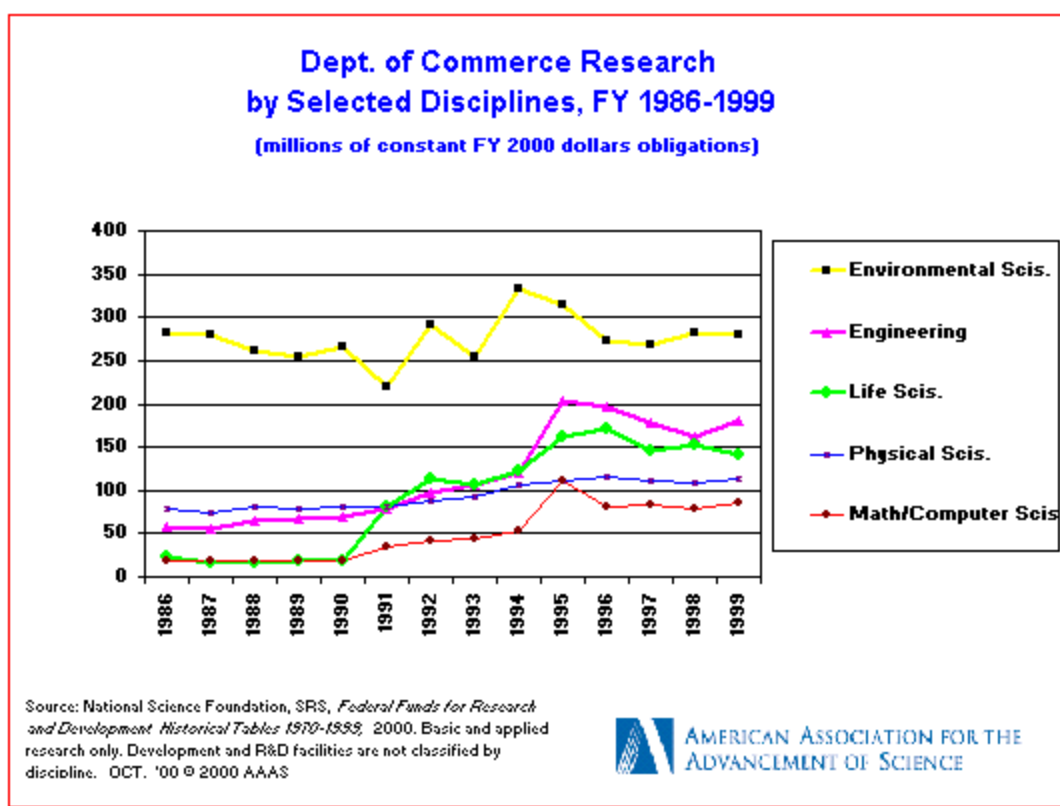


Figure 3.

President Clinton signed the Commerce-Justice bill on December 21, and on the same day signed a Labor-HHS appropriations bill reducing discretionary appropriations in the Commerce-Justice bill by an across-the-board 0.22 percent.

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**Table. Department of Commerce
R&D in the FY 2001 Budget (FINAL)
(budget authority in millions of dollars)**

	FY 2000 Estimate	FY 2001 Request	Final FY 2001 Appropriations				
			FY 2001 FINAL	Chg. from Request Amount	Percent	Chg. from FY 2000 Amount	Percent
National Oceanic and Atmospheric Administration:							
TOTAL NOAA R&D	591	594	638	44	7.5%	47	8.0%
<i>Total ORF (incl. non-R&D)</i>	<i>1,688</i>	<i>1,848</i>	<i>1,865</i>	<i>17</i>	<i>0.9%</i>	<i>177</i>	<i>10.5%</i>
<i>Total NOAA (incl. non-R&D)</i>	<i>2,344</i>	<i>2,761</i>	<i>2,622</i>	<i>-139</i>	<i>-5.1%</i>	<i>278</i>	<i>11.9%</i>
National Institute of Standards and Technology:							
Scientific & Technical Research	236	269	257	-12	-4.6%	21	8.8%
Advanced Technology Program R&D	115	148	123	-25	-17.1%	8	6.8%
IIIP ¹	0	44	5	-39	-89.7%	5	--
Construction	107	36	35	-1	-3.0%	-72	-67.4%
TOTAL NIST R&D	458	497	419	-78	-15.7%	-39	-8.5%
<i>STRS Non-R&D Activities</i>	<i>46</i>	<i>62</i>	<i>50</i>	<i>-12</i>	<i>-19.4%</i>	<i>4</i>	<i>8.8%</i>
<i>ATP, IIIP Non-R&D Activities</i>	<i>28</i>	<i>32</i>	<i>23</i>	<i>-9</i>	<i>-27.3%</i>	<i>-5</i>	<i>-16.7%</i>
<i>Manufacturing Extension Partnership</i>	<i>104</i>	<i>114</i>	<i>105</i>	<i>-9</i>	<i>-8.1%</i>	<i>1</i>	<i>0.7%</i>
<i>Total NIST Budget</i>	<i>636</i>	<i>705</i>	<i>597</i>	<i>-108</i>	<i>-15.3%</i>	<i>-39</i>	<i>-6.1%</i>
Bureau of the Census	2	2	2	0	0.0%	0	0.0%
National Telecomm. and Info. Admin.	20	53	49	-4	-6.8%	29	147.0%
Economic Development Administration	1	1	1	0	0.0%	0	0.0%
Technology Administration	1	1	1	0	0.0%	0	0.0%
Total Commerce R&D	1,073	1,148	1,111	-37	-3.3%	38	3.5%

AAAS estimates based on FY 2001 appropriations bills. Includes conduct of R&D and R&D facilities.

FY 2000 and FY 2001 request figures based on OMB R&D data and supplemental agency budget data.

Figures are rounded to the nearest million. Changes calculated from unrounded figures.

¹ Institute for Information Infrastructure Protection. FY 2001 Final figure represents infrastructure protection R&D within Scientific and Technical Research appropriation.

FY 2001 FINAL figures adjusted to reflect 0.22 percent across-the-board cut.

December 20, 2000 - FINAL FY 2001 funding levels.