

Congress Finalizes 9 Percent Increase for DHS R&D in FY 2009

AAAS R&D Funding Update on Dept. of Homeland Security R&D in FY 2009 House-Senate Conference Appropriations

Highlights

- Congress has finalized an appropriations bill providing \$1.1 billion in fiscal year (FY) 2009 for R&D in the Department of Homeland Security (DHS), a 9.4 percent or \$93 million increase over 2008.

- R&D on radiological and nuclear countermeasures in the Domestic Nuclear Detection Office (DNDO) would fall slightly with a \$5 million or 1.9 percent cut to \$269 million, and chemical and biological countermeasures R&D in the Science and Technology Directorate would also fall (down 3.7 percent to \$200 million). But there would be large increases for R&D to support other DHS missions such as explosives, technology transitions, border and maritime security, and protecting infrastructure, and a dramatic 56 percent increase for DHS laboratory facilities to \$162 million.

- University Programs funding would gain slightly by \$1 million to \$50 million.

- In addition, DHS will receive \$2.2 billion in already-appropriated funds for Project Bioshield on October 1, to procure promising biodefense countermeasures from the private sector for the national stockpile.

DHS R&D in FY 2009 House-Senate Conference Appropriations

On September 24, the House of Representatives debated and approved a massive FY 2009 continuing resolution (CR) funding federal government programs through March 6 but also containing \$23 billion in disaster relief spending and three full FY 2009 appropriations bills, including a final Homeland Security appropriations bill with funding for the Department of Homeland Security (DHS). If the Senate and the President agree, as expected, to the CR then DHS will get a final FY 2009 budget next week. Just last week, the House Appropriations Committee reported a House version of the bill, but before the House could even debate it the bill was replaced by the new CR version, which represents a compromise between the House and Senate versions of the bill even though there was no formal House-Senate conference. (For details of DHS R&D in the House bill, see the September 22 AAAS R&D Funding Update; for details of the Senate bill, see the July 1 R&D Funding Update; for details of the President's request for DHS R&D, see the Feb. 20 R&D Funding Update or Chapter 11 in *AAAS Report XXXIII: R&D FY 2009*.)

Congress has settled on \$1.1 billion for the DHS R&D portfolio in FY 2009, an increase of \$93 million or 9.4 percent over 2008, well above earlier House or Senate appropriations as well as the request (see Table). The final congressional appropriation is \$52 million more than the DHS request, although \$45 million of the congressional add is from earmarks (congressionally designated, performer-specific projects). Excluding the 2009 earmarks as well as \$82 million in 2008 earmarks, **there is a 14.3 percent increase for the core (non-earmarked) DHS R&D portfolio.**

Radiological and nuclear countermeasures R&D in the Domestic Nuclear Detection Office (DNDO) continues to be the largest part of the DHS R&D portfolio in 2009 (see Figure 1). DNDO was carved out of the S&T Directorate in 2006 and is now a stand-alone entity devoted to radiological and nuclear countermeasures. Congress trims DNDO's plan to increase its basic and applied research portfolio and instead cuts funding by 1.9 percent or \$5 million to \$269 million in 2009, within a total DNDO budget of \$514 million. (The difference between the two totals is procurement of nuclear detection devices for U.S.

ports of entry, management costs, and operations support costs.) In 2009, DNDO budget increases would go to the procurement side instead of the research side. But within the research portfolio the Transformational Research and Development program, tending toward the basic research end with a focus on transformative breakthroughs, would receive a \$7 million increase to \$103 million.

The chemical and biological countermeasures portfolio, which remains in the S&T directorate, would receive \$200 million, down 3.7 percent from the current year to remain the second-largest part of the DHS R&D portfolio (see Figure 1). Although this portfolio has been larger in previous years (see Figure 2), in 2007 DHS spun off non-R&D programs such as the BioWatch surveillance system to other DHS units, leaving behind only purely R&D programs.

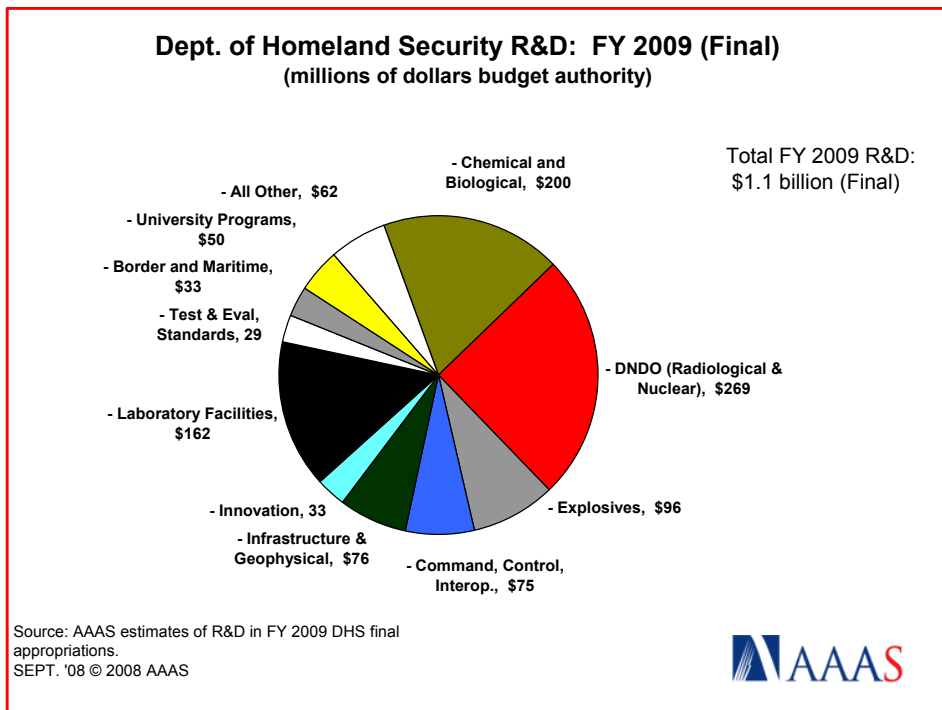


Figure 1. (click on the image for PDF)

The Laboratory Facilities appropriation is the fastest-growing part of the DHS R&D portfolio, climbing 56 percent or \$58 million to \$162 million (see Figure 2 and Table). Part of the increase is because DHS is moving its R&D staff salaries to this account in FY 2009, but there will also be increased funding for construction of DHS laboratory facilities. Construction of the National Biodefense Analysis and Countermeasures Center (NBACC) would be finished in 2008 and the FY 2009 appropriation of \$33 million, double this year's funding, would be used to start operations. NBACC will be part of a biodefense complex of DHS, NIH, and DOD facilities at Fort Detrick, Maryland. There would also be \$36 million, more than triple 2008 funding, for detailed design of the National Bio and Agrodefense Facility (NBAF), working toward the beginning of construction in 2010 after a site selection later this year. But Congress attaches conditions to the NBAF appropriation: before DHS can spend the money, it must do a risk analysis of doing foot-and-mouth disease research on the U.S. mainland and have the Government Accountability Office (GAO) review it. Currently, DHS performs foot-and-mouth disease research at its lab on Plum Island, off the coast of Long Island in New York, and there are concerns that moving the research to a site on the U.S. mainland could make U.S. livestock vulnerable to the disease. Congress also adds to the request for ongoing construction activities at the Pacific Northwest National Laboratory in Washington, for a total of \$25 million. Separately, the Infrastructure and Geophysical appropriation appears to climb \$11 million to \$76 million, double the request, but only because of two large earmarked projects.

Funding for University Programs would inch up to \$50 million in 2009, \$37 million of which would fund university-based Centers of Excellence, multi-year university consortia to perform R&D on homeland security-related topics. There are now seven DHS Centers of Excellence, one funded jointly with EPA and another with the Lawrence Livermore National Laboratory, and up to six more could be awarded soon. The account also funds fellowships to encourage U.S. students to pursue scientific and technical degrees in areas of study related to homeland security, and other university-related programs such as DHS agreements with minority-serving institutions.

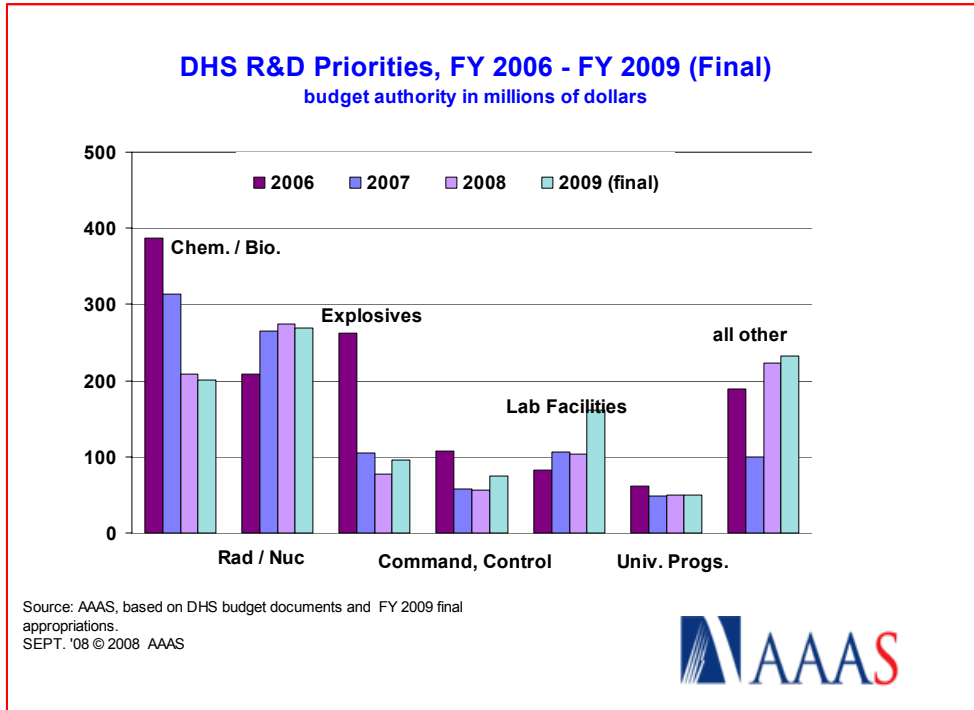


Figure 2. (click on the image for PDF)

The Innovation portfolio, to develop breakthrough technologies and highly innovative approaches to homeland security problems, would remain flat at \$33 million, well below the \$45 million request because of congressional concerns over how the S&T directorate selects and manages projects in this account, and frustration at S&T delays in reporting how 2008 funds are being spent.

DHS R&D, after a rapid ramp-up phase, grew too rapidly and is now in retrenchment and reorganization. As shown in Figure 3, DHS began life with only a few R&D laboratories and programs that it inherited from USDA, DOE, and DOD. From a transfer of less than \$300 million of programs in 2002, DHS expanded rapidly after its foundation in FY 2003 (see Figure 3), adding portfolios on long-neglected technology areas, establishing relationships with existing national laboratories and federal laboratories, and setting up new structures for funding external R&D.

But the S&T directorate struggled to ramp up its capabilities, staffing, and spending, prompting Congress to slash its funding dramatically in 2007 and impose numerous restrictions and demands. Congress rescinded \$125 million in unspent R&D funds in 2007 and made program cuts in most areas. Although the 2007 and 2008 R&D totals were well below appropriations of previous years, DHS is still working through its backlog of unspent funds. So while DHS' appropriations history in Figure 3 is uneven, the actual outflow of money will be smoother as appropriations get stretched out into outlays over several years.

The new DNDO also appears to have problems in ramping up its operations. In the 2008 omnibus bill, appropriators expressed concern that DNDO has been unable to hire staff quickly enough to keep up with the rapid growth in its budget, and criticized DNDO for providing too little detail on how it plans to spend

its appropriations. These problems have not gone away: the report accompanying the final 2009 bill criticizes DNDO for not being able to hire key staff in 2008, thereby leaving staffing below 2007 levels.

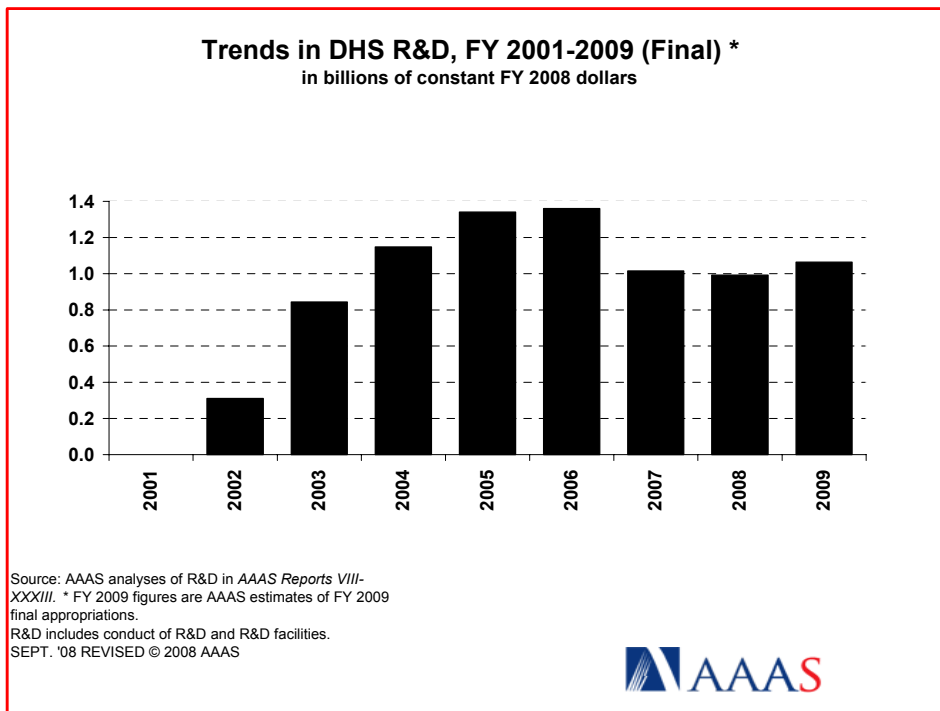


Figure 3. (click on the image for PDF)

Although it is not technically an R&D program, DHS received \$5.6 billion over 10 years in three advance appropriations for Project Bioshield, a program to procure promising biodefense countermeasures from the private sector for the national stockpile. The last installment of \$2.2 billion becomes available at the beginning of FY 2009. Although Bioshield started in DHS and its funding remains there, the operations and management of the program have migrated to the Department of Health and Human Services (HHS), which has set up an office to evaluate and select countermeasures eligible to receive Bioshield funding.

Outlook and Next Steps

The House quickly approved the continuing resolution (CR) containing the Homeland Security bill on September 24 with little debate. If the Senate and the President agree to the CR in the next few days, then DHS will be one of the few federal agencies to begin FY 2009 with a final 2009 budget, along with the Departments of Defense (DOD) and Veterans Affairs (VA).

(This analysis is one of a series of AAAS R&D Funding Updates on FY 2009 congressional appropriations. The complete series of AAAS R&D Funding Updates, including continually updated analyses of R&D in FY 2009 appropriations, is available on the AAAS R&D Web Site (<http://www.aaas.org/spp/rd>) in the “FY 2009 R&D” or the “What’s New” sections.)

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Table. DHS R&D in FY 2009 House-Senate Conference

**Table. Department of Homeland Security
House-Senate Conference on R&D in the FY 2009 Budget
(budget authority in millions of dollars)**

	FY 2008 Estimate	FY 2009 Request	House-Senate Conference				
			FY 2009 CONF.	Chg. from Request Amount	Percent	Chg. from FY 2008 Amount	Percent
DHS R&D:							
Dom. Nuclear Detection Office 1/	274	279	269	-10	-3.6%	-5	-1.9%
Science and Technology 1/	692	737	800	64	8.7%	109	15.8%
- <i>Chemical and Biological</i>	208	200	200	0	0.0%	-8	-3.7%
- <i>Border and Maritime</i>	25	35	33	-2	-6.4%	8	29.7%
- <i>Command, Control, Interop.</i>	57	62	75	13	20.0%	18	31.4%
- <i>Explosives</i>	78	96	96	0	0.0%	18	23.8%
- <i>Human Factors</i>	14	12	12	0	0.0%	-2	-12.3%
- <i>Infrastructure & Geophysical</i>	65	38	76	38	100.5%	11	17.5%
- <i>Innovation</i>	33	45	33	-12	-26.7%	0	0.0%
- <i>Laboratory Facilities</i>	104	147	162	15	10.2%	58	56.0%
- <i>Test & Eval, Standards</i>	29	25	29	4	16.2%	0	0.5%
- <i>Transition</i>	25	32	29	-3	-9.4%	4	14.1%
- <i>University Programs</i>	49	44	50	7	14.9%	1	2.0%
- <i>Rescissions</i>	0	0	0	0	--	0	--
- <i>Homeland Security Institute</i>	5	0	5	5	--	0	--
Coast Guard	27	18	16	-2	-11.1%	-11	-40.7%
Total DHS R&D	992	1,033	1,085	52	5.0%	93	9.4%
Total Budgets (including non-R&D):							
Sci. & Tech.	830	869	933	64	7.3%	102	12.3%
DNDO	484	564	514	-50	-8.8%	30	6.2%
Project Bioshield 2/	0	2,175	2,175	0	0.0%	2,175	--

AAAS estimates based on FY 2009 appropriations bills. Includes conduct of R&D and R&D facilities.

FY 2008 and FY 2009 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/ R&D items only. Non-R&D components and line items are excluded.

2/ Advance appropriation available in FY 2009.

September 24, 2008 - AAAS estimates of final FY 2009 Homeland Security appropriations bill.

These appropriations are final unless they are rejected by the House or Senate, or vetoed.