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EPA R&D Falls in FY 2005 Budget

AAAS R&D Funding Update on R&D in the FY 2005 EPA Budget

(This analysis is a preview of the EPA section in the forthcoming *AAAS Report XXIX: Research and Development FY 2005*, a comprehensive look at the President's budget for R&D in FY 2005. This analysis contains revised AAAS estimates of EPA R&D, different from figures presented in the AAAS Preliminary Analysis of February 5. More tables and continually updated supplemental materials on R&D in the FY 2005 budget can be found on the AAAS R&D Web site at http://www.aaas.org/spp/rd.)

Highlights

- The Environmental Protection Agency's (EPA) R&D budget would fall 7.1 percent or $44 million to $572 million in FY 2005 (see Table II-17). Although some of the cuts would be due to the proposed elimination of R&D earmarks, funding for many R&D programs would also decline.

- The extramural Science to Achieve Results (STAR) program would see its budget fall to $65 million, a steep drop from the $100 million annual funding levels of the past several years. EPA would eliminate STAR grants entirely in four research areas.

- EPA's overall budget would fall 6.9 percent down to $7.8 billion, with particularly steep cuts to State and Tribal Assistance Grants and the Science and Technology program.

EPA R&D in the FY 2005 Budget

EPA's R&D, mostly funded in the **Science and Technology** account, would total $572 million in the FY 2005 budget request, a cut of $44 million or 7.1 percent (see Table II-17). The FY 2004 omnibus bill contained 41 congressional earmarks in the S&T account and another 11 R&D earmarks in normally non-R&D Environmental Programs and Management account, many of them renewed from FY 2003, for a total of $56 million in R&D earmarks (AAAS estimates). The FY 2005 budget would eliminate these earmarks, for a slight net increase in FY 2005 for EPA's core R&D programs.

R&D in the S&T account would fall by 4.7 percent to $535 million in FY 2005. Much of the decrease is due to the proposed elimination of R&D earmarks. This would free up money for some program increases, such as particulate matter research which would increase from the congressionally appropriated level of $35 million this year back up to last year's funding level of $64 million next year, and computational toxicology ($5 million in FY 2003 to $9 million this year to $13 million next year). But most EPA research areas would see flat or declining funding, including global change research (down slightly to $21 million), water quality research (down slightly to $47 million), pollution prevention research (down $5 million to $33 million), pesticides and toxics research (down $7 million to $29 million), human health and ecosystems research (down $13 million to $177 million), and drinking water research (flat at $46 million).

EPA's funding of competitively awarded extramural research would fall steeply. EPA's Science to Achieve Results (STAR) program of extramural research grants would receive only $65 million in FY 2005, down a third from the $100 million level of this year and the previous three years. EPA would eliminate STAR grants entirely in the areas of endocrine disruptors, ecosystems, mercury, and pollution prevention, and cut next year's funding in half for existing extramural hazardous substance research centers. Hardest hit would be ecosystems research, with the elimination of $22 million in STAR grants.

EPA would shift funds toward intramural research in its own labs for the affected areas. With a typical STAR grant totaling $500,000, EPA estimates that 70 fewer research projects would be funded next year. Because STAR grants are often multi-year projects, the reduced FY 2005 request would also mean reductions in planned grant awards this year to reduce the commitment base next year.

In non-R&D programs, the FY 2005 budget requests **$8 million for the STAR Fellowship Program**, below the $9.7 million appropriation in FY 2004 and similar appropriations in previous years for this program to encourage science and engineering graduate students to study environmental science fields that could be of use to EPA's mission.

EPA's S&T investments are a small part of the overall EPA portfolio (see Figure 1), and are designed to support EPA's regulatory and enforcement missions. The proposed cut to EPA's R&D mirrors EPA's proposal to cut the overall FY 2005 budget by 6.9 percent down to $7.8 billion, a loss of $576 million. EPA requests only $3.2 billion for **State and Tribal Assistance Grants (STG)**, perennially a higher priority for Congress than for EPA. Last year, EPA requested a cut in STG from $3.8 billion to $3.1 billion, but Congress provided $3.9 billion. Most of this money goes to state, local, and tribal governments to fund environmental projects, primarily projects to preserve clean drinking water. For **Environmental Programs and Management**, which funds most of EPA's operating expenses, the request of $2.3 billion represents a slight increase over FY 2004. The overall S&T account would fall 12 percent to $689 million; the overall account would decline more than the R&D portion of S&T because of the completion of non-R&D drinking water vulnerability assessments in FY 2004.

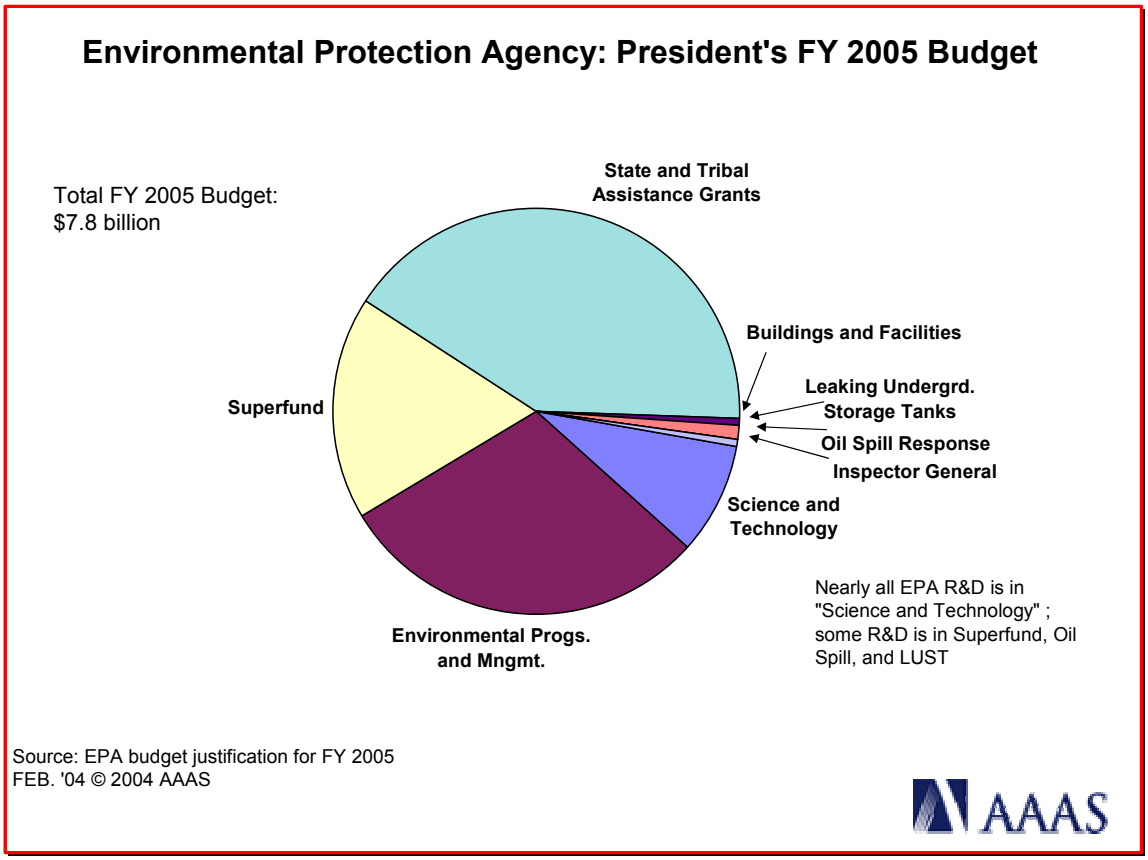

Figure 1. (click on the image to view or download a color, full-page PDF version of the chart)

Impacts of the EPA R&D Portfolio

EPA's basic and applied research support (excluding development and R&D facilities) comprises the majority (75 percent) of EPA's R&D. The largest part of EPA's research is in the life sciences (primarily biology and environmental biology), with significant support for the environmental sciences and engineering as well. Although EPA is the major environmental regulatory agency in the federal government, many other agencies have environmental responsibilities related to research, resource stewardship, and economic management of the environment, so EPA is a relatively small funding source for environmental R&D. In the environmental sciences, EPA accounts for only 4 percent of total federal support, while in the life sciences EPA funds only 1 percent of total federal support.

Roughly 45 percent of EPA's R&D is performed in the agency's own laboratories, while about 16 percent is performed by industrial firms. Nearly a third of EPA's R&D is performed by colleges and universities, a share that has been growing in recent years as EPA has attempted to expand its links with academia. The FY 2005 proposal to cut STAR funding, however, would represent a major retreat from EPA's support of academic research. The remainder is performed by nonprofit institutions and state and local governments.

EPA's R&D support has been declining slowly for the past few years after steady growth in the late 1990s. EPA's R&D budget declined sharply after FY 1994 and bottomed out in FY 1996 (see Figure 2). In subsequent years, EPA's R&D grew until FY 1999. EPA R&D declined again in FY 2000, and has mostly just kept pace with inflation since then. EPA R&D has essentially stayed at $600 million in today's dollars for more than a decade.

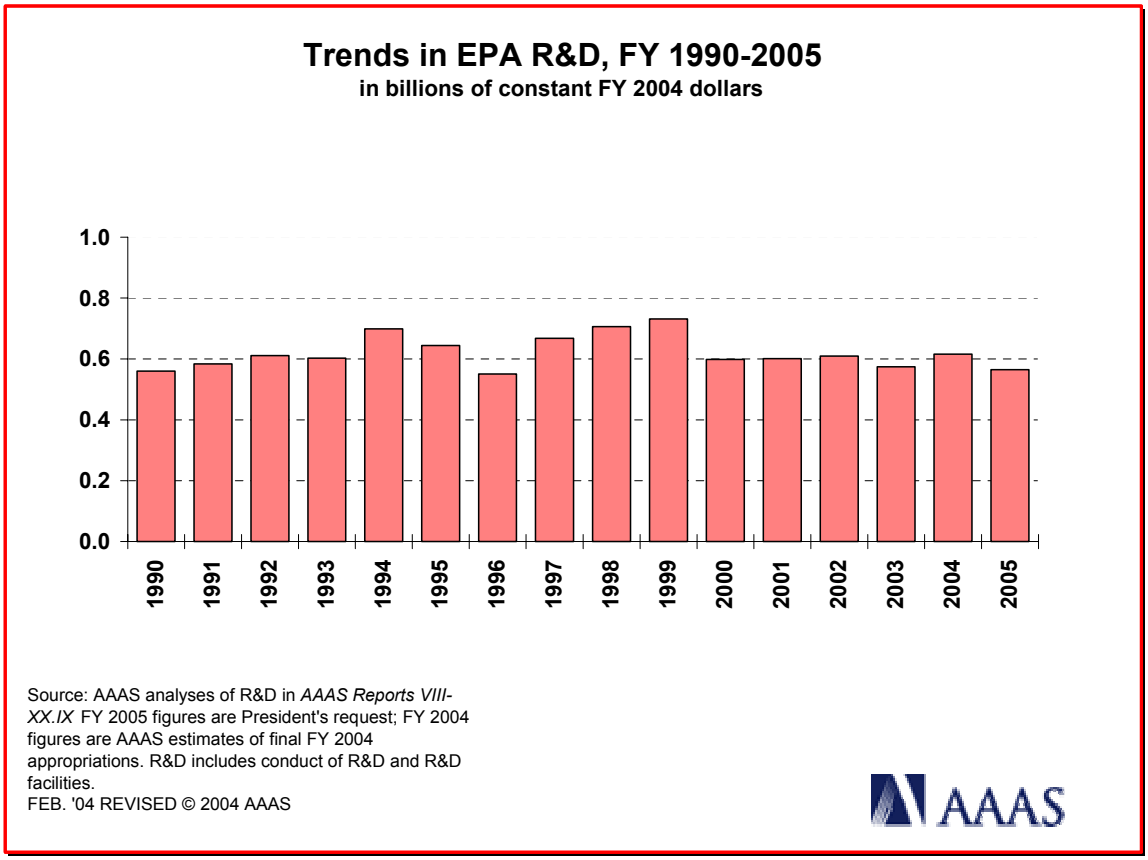

Figure 2. (click on the image to view or download a color, full-page PDF version of the chart)

Even the flat funding of recent years may look good compared with what lies in store. With Congress and the President apparently committed to reducing the budget deficit in half within the next five years

primarily through holding down domestic spending, the consequences for EPA are becoming clearer. The FY 2005 budget contains preliminary projections for the EPA budget out to FY 2009. **In FY 2006, EPA R&D could fall even further to $560 million**, and end up well below this year's funding level at $569 million by FY 2009. **After adjusting for expected inflation, the five-year Bush budget would leave EPA's R&D funding 15 percent *below* this year's funding level in 2009.**

- February 25, 2004

(More materials on R&D in the FY 2005 budget, historical data and charts, and more information on *AAAS Report XXIX: Research and Development FY 2005*, can be found on the AAAS R&D Web site at http://www.aaas.org/spp/rd.)

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Table II-17. Environmental Protection Agency R&D

Table II-17. R&D in the Environmental Protection Agency
(budget authority in millions of dollars)

	FY 2003 Actual	FY 2004 Estimate	**FY 2005 Budget**	Change FY 04-05 Amount	Change FY 04-05 Percent
EPA R&D by account:					
Science and Technology [1]	512	561	**535**	-26	-4.7%
Superfund	49	45	**36**	-9	-19.2%
Leaking Undergrd. Storage Tanks	1	1	**1**	0	0.0%
Oil Spill Response	1	1	**1**	0	0.0%
Environmental Progs. and Mngmt.	5	9	**0**	-9	-100.0%
Total EPA R&D	567	616	**572**	-44	-7.1%
EPA Budget (Includes R&D components above):					
Science and Technology [1]	714	782	**689**	-93	-11.9%
Environmental Progs. and Mngmt.	2,103	2,280	**2,317**	37	1.6%
Superfund	1,265	1,257	**1,381**	124	9.9%
State and Tribal Assistance Grants	3,835	3,877	**3,232**	-645	-16.6%
Buildings and Facilities	43	40	**43**	3	7.5%
Leaking Undergrd. Storage Tanks	72	76	**73**	-3	-3.9%
Oil Spill Response	15	16	**16**	0	0.0%
Inspector General	36	37	**38**	1	2.7%
Total EPA Appropriations	8,083	8,365	**7,789**	-576	-6.9%

Source: OMB data for R&D for FY 2005, agency budget justification, information from agency budget office, and *Budget of the United States Government FY 2005.*
Discretionary budget authority only. Excludes mandatory spending and offsets.
All figures are rounded to the nearest million. Changes calculated from unrounded figures.

[1] Excludes transfers from Superfund (see Superfund line).

Please see Chapter 13 for a discussion of EPA R&D.