U.S. HOUSE OF REPRESENTATIVES
COMMITTEE ON SCIENCE AND TECHNOLOGY
SUBCOMMITTEE ON ENERGY AND ENVIRONMENT

HEARING

EPA's FY 2008 Science and Technology Budget Proposal
Wednesday, March 14, 2007
2:00 p.m. to 4:00 p.m.
2318 Rayburn House Office Building

Purpose

On Wednesday, March 14, 2006 at 2:00 p.m. the House Committee on Science and Technology's Subcommittee on Energy and Environment will hold a hearing to examine the Environmental Protection Agency's (EPA) fiscal year 2008 (FY08) budget request for Science and Technology (S&T).

Witnesses

Dr. George Gray, Assistant Administrator for the Office of Research and Development and Science Advisor, U.S. Environmental Protection Agency.

Dr. M. Granger Morgan, Chair, EPA's Science Advisory Board (SAB); Lord Chair Professor in Engineering and Professor and Department Head, Department of Engineering and Public Policy, Carnegie Mellon University.

Dr. Jennifer Sass, Senior Scientist, Health and Environment, Natural Resources Defense Council

Dr. Bruce Coull, Dean Emeritus, School of the Environment, University of South Carolina and the National Council for Science and the Environment

Background

Overall FY 2008 for EPA

Environmental Protection Agency's (EPA) overall FY08 budget request is $7.2 billion, a reduction of 5.5 percent compared to the FY06 enacted level of funding for the Agency. EPA is one of two agencies that are cut in the President's FY08 request for federal spending.

The table below shows the eight primary accounts of the Agency's budget. The Environmental Program and Management (EPM) account funds the agency's air, water, waste, toxics and pesticides programs. The Superfund account supports clean up of hazardous waste sites. The Superfund account also includes funds for Superfund enforcement, Science and Technology (S&T) to develop and test new methods for clean up and set clean-up standards, and funds for

the Inspector General's office to address Superfund issues. The State and Tribal Assistance Grants (STAG) account provides grants to states and local communities to support water and sewage treatment infrastructure construction and improvements. The largest reduction is in the STAG account.

Figure 1: EPA FY 2008 Budget Request (Budget Authority in Millions of dollars)

EPA Account	FY 2006 Appropriation[1]	President's FY 08 Request	FY08 Request vs. FY06 Appropriation	% Change
Science & Technology[2]	**731**	**755 (690)[2]**	**+24 (-41)[2]**	**+3.3 % (-5.6)[2]**
Environmental Programs & Management[2]	2347	2298 (2363)[2]	-49 (+16)[2]	- 2.1% (+0.7 %)[2]
Inspector General	37	38	+ 1	+ 2.7 %
Buildings & Facilities	40	35	- 5	-12.5 %
Oil Spill Response	16	17	+ 1	+ 6.25 %
Program Funds	1199	1211	+	+ %
S & T	**30**	26	**-**	**- %**
Insp. General	13	7	- 6	-46%
Total SUPERFUND[3]	1242	1245	+ 3	+ 0.24 %
LUST	72	72	0	-
State & Tribal Asst. Grants	3214	2744	- 470	- 14.6%
Rescission	80	5	-	-
TOTAL EPA	**7,617 M**	**7,199 M**	**- 418 M**	**- 5.5 %**

[1] The total enacted appropriations for FY06 and the individual account lines include a 0.476 percent rescission and an additional 1 percent rescission. The $80 million rescission included in the Table reduced the funding to the Total shown.

[2] The values in the parentheses reflect the actual requested changes in program dollars. Funds to cover facilities infrastructure and operations for all Agency facilities prior to FY07 request were all included in the Environmental Programs and Management (EPM) account. Beginning with the FY07 request, the Administration's budget began to break out the funds requested for S&T facilities for infrastructure and operations from the EPM account and to include them in the S&T account. This had the effect of increasing the S&T account and lowering the EPM account by the amount needed to cover the costs of maintaining S&T facilities. The total for S&T shown in the Agency's budget request contains $65 million to cover the cost of S&T facilities. There is no impact on the total budget request for the Agency. (S&T-49 of the Congressional Justification)

FY 2008 Science & Technology Account

The presentation of the Administration's budget request in the Agency's Congressional Justification for S&T is $781 million. This includes the S&T account funding the Office of Research and Development (ORD) and S&T activities conducted by the program offices (e.g.

Office of Air, Office of Water), $755 million, as well as funds requested for S&T activities associated with the Superfund program, $26 million. In the past, the Superfund S&T funds were drawn primarily from the Superfund trust that was funded by the dedicated Superfund tax. Since the expiration of the tax, this fund no longer exists and all funds must be appropriated from the general treasury.

Nearly $540 million (69 percent) of S&T funding is for EPA's Office of Research and Development (ORD), which is the primary research arm of the agency. Typically, most of the remaining S&T funds go to the Office of Air and Radiation, and a smaller amount to the Office of Water and to the other program offices.

However, the S&T number presented in the FY08 request is not directly comparable to the FY06 enacted level of funding for S&T because it includes an accounting change the Administration initiated with the presentation of the FY07 budget request. The actual budget request for S&T programs is $690 million, a reduction of 5.6 percent below FY06 funding.

In the FY07 budget request, the Administration instituted an accounting change that transferred the cost of operations and maintenance of all S&T facilities from the Environmental Program and Management account to the S&T account. Prior to FY07, the funding for S&T facilities was included with all other facilities in the EPM account. When this transfer is accounted for, the actual FY08 S&T request is reduced by $65 million to $716 million, a $41 million reduction below FY06 enacted funding levels.

Office of Research and Development

ORD conducts and sponsors both fundamental research in environmental science and more targeted research that inform EPA's regulatory programs. For example, ORD develops the scientific risk information for the agency's Integrated Risk Information System (IRIS), a database about human health effects from chemicals in the environment. This program is used by EPA, States, and other government agencies to determine hazardous waste site clean up levels, drinking water, and other health-based standards. In air quality, ORD develops the scientific underpinning for EPA's air quality standards in areas such as particulate matter and ozone. ORD also investigates emerging environmental questions such as the environmental implications and applications of nanotechnology.

To carry out these responsibilities, ORD conducts intramural research at EPA's laboratories, awards contracts, and supports fellowships and research at colleges and universities through the Science to Achieve Results (STAR) grant program. The table below provides the breakout of ORD funds among the various research programs at ORD.

Figure 2: EPA ORD Budget Changes
2006 Enacted versus Presidents FY 2008 Request (in millions)[1]

Program	FY 2006 Enacted	FY 2008 Request	Change in Millions	% Change
Air Toxics	$ 16.2	$ 0	- $ 16.2	- 100 %
NAAQS	$ 66.8	$ 0	- $ 66.8	- 100 %
Clean Air (shifting funds from Air Toxics and NAAQS with $1.9 M decrease)	$ 0.0	$ 81.1	+ $ 81.1	+ 100 %
Drinking Water	$ 45.2	$ 48.5	+ $ 3.3	+ 7 %
Water Quality	$ 51.3	$ 56.5	+ $ 5.2	+ 10 %
Land	$ 36.0	$ 32.4	- $ 3.6	- 10 %
SITE	$ 1.2	$ 0.0	- $ 1.2	- 100 %
Homeland Security	$ 31.7	$ 35.7	+ $ 4.0	+ 13 %
Human Health Risk Assessment	$ 39.4	$ 42.8	+ $ 3.4	+ 9 %
Computational Toxicology	$ 12.3	$ 15.1	+ $ 2.8	+ 23 %
Endocrine Disruptors	$ 10.5	$ 10.1	- $ 0.4	- 4 %
Global Change	$ 18.6	$ 16.9	- $ 1.7	- 9 %
Human Health and Ecosystems	$ 167.7	$ 145.0	- $ 22.7	- 14 %
Pesticides and Toxics	$ 30.4	$ 24.8	- $ 5.6	- 18 %
Fellowships	$ 11.7	$ 8.4	- $ 3.3	- 28 %
Environmental Technology Verification	$ 3.0	$ 0.0	- $ 3.0	- 100 %
Economic and Decision Sciences	$ 2.4	$ 0.0	- $ 2.4	- 100 %
Sustainability	$ 26.1	$ 22.5	- $ 3.6	- 14 %
Congressional Earmarks	$ 24.4	$ 0.0	- $ 24.4	- 100 %
Total	**$ 594.7 M**	**$ 539.8 M**	**- $ 55.1 M**	**- 9 %**

[1] Information for Figure 2 provided by EPA's Office of Research and Development briefing on March 1, 2007 to Subcommittee on Energy and Environment.

Budget Highlights

- If enacted, the FY08 request ($539.8 M) for ORD would be its lowest funding level since FY00 and $106.7 million less than its peak funding level of $646.5 million in FY04.

- The FY08 S&T request includes $10.2 million for research on the environmental implications of nanotechnology in the Human Health & Ecosystems program, a 91 percent increase over the FY06 enacted level.

- The FY07 S&T request includes $68.2 million for Ecosystem Research, $6 million (or 8 percent) below the FY06 enacted level, and $28 million (26 percent) below the FY04 enacted level. Almost all of the FY07 reduction ($5 million) would be taken from the Environmental Monitoring Assessment Program, (EMAP), which supports states' measurements of water quality conditions and ecosystem health.

- The FY08 budget proposes the elimination of the Superfund Innovative Technology Evaluation (SITE) Program ($1.2 million) and the elimination of funding for the Environmental Technology Verification (ETV) program ($3.0 million). Both programs support the development and testing of innovative environmental technologies for cleanup of hazardous substances. The SITE program was created in the Superfund statute.

- The FY08 President's Budget merges the Air Toxics and NAAQS programs into a Clean Air program which will focus on multi-pollutant sources and effects rather than sources and effects of individual pollutants.

- The FY08 budget reduces funding for the STAR grant program by nearly $10 million as compared to FY06 enacted funding to $61.9 million.

Key Issues

The overall spending by EPA's research programs has been declining for several years. The Administration argues that the agency's research is adequately funded given overall constraints on the Federal budget and that EPA S&T funds have been focused on emerging priorities, while programs that are not as pressing or effective have been scaled back. Critics of the budget, including EPA's Science Advisory Board, have argued that EPA's core research programs are being eroded in ways that will limit understanding of the environment and hamper the agency's ability to formulate sound policies.

The information below describes programs that have received some of the most significant cuts or increases.

Land

The land research program is tasked with the objective of reducing potential risks to human health and the environment at contaminated waste sites by providing the science to accelerate

clean-up decisions. Research activities focus on contaminated sediments, ground water contamination, site characterization, analytical methods, and site-specific technical support. The President's FY08 budget requests $32.4 Million for the Office of Research and Development's land research program, a $3.6 Million dollar decrease from FY06 enacted funding. This 10 percent reduction in funding could undermine future U.S. remediation efforts as the Agency will lack the necessary scientific research to cost-effectively clean contaminated waste sites.

Human Health

The human health research program leads the Agency's research efforts on cumulative risks to human beings. Research focuses on risk intervention and prevention strategies that aim to reduce human risk associated with exposures to single and multiple environmental stressors.

In its budget analysis, EPA expresses the importance of funding critical research to address the health risks of susceptible subpopulations, including: children, adolescents, and the elderly. However, the President's FY08 Budget request for $56.8 million reflects a $4.7 million dollar decrease from the FY06 enacted funding. This 7 percent cut in funding from $61.5 million stands at odds with the important mission of protecting human health, especially vulnerable populations. Furthermore, the overall budget request of Human Health and Ecosystem receives a $22.7 million decrease compared with FY06 enacted funding, a 14 percent cut.

Ecological Research

Within the Environmental Protection Agency, ecological research aims to assess ecosystem conditions and trends, diagnose impairments, forecast ecosystem vulnerability, and restore degraded ecosystems. The proposed FY08 budget request of $68.2 million represents an $18.1 million (31 percent) decrease from the FY06 enacted level and a $40 million (37 percent) reduction since FY04. The FY08 cut would be taken primarily in the Environmental Monitoring Assessment Program (EMAP), which supports data collection in the lower Mississippi River and Gulf of Mexico wetlands.

In the EPA budget analysis, the agency describes the necessity of providing critical research on the restoration of large floodplain rivers and to improve scientific understanding of causal links between stressors and changes in ecosystem processes. However, the repeated cuts in funding for ecological research have drastically reduced the agency's ability to monitor or protect our nation's ecosystems.

Pesticides and Toxics

The pesticide and toxics research program examines risks resulting from exposure to pesticides and toxic chemicals. This research supports the Agency's efforts to reduce current and future risk to the environment and humans by controlling the production and release of potentially hazardous chemicals. The President's FY08 Budget requests $24.8 million, which is a decrease of $5.6 million from the $30.4 million FY06 enacted funding level. This 18 percent reduction will negatively impact important research used to develop a screening process for potential neuro- and immuno-toxicity of chemicals.

Fellowships

The Environmental Protection Agency created the Science to Achieve Results (STAR) grant program in 1995 and the program was funded at just over $100 million per year between the late 1990s and 2002. The program was recommended by an outside advisory panel convened in 1992 and reaffirmed in National Academy of Sciences reports in 2000 and 2003. These reports stated that EPA should increase its funding of students and research in academia to draw on a wider range of research. The bulk of STAR funds have been allocated to competitive research grants in targeted mission-critical areas, with a smaller portion reserved for graduate fellowships and for exploratory research on the next generation of environmental challenges.

The STAR program provides both research grants and graduate student fellowships. Since its peak funding level of just over $102 million in FY02, the grants program has declined every year. The FY08 budget proposes reducing the fellowships to a level of $8.4 million or $3.3 million (28 percent) below the FY06 enacted level of $11.7 million. STAR grants would be reduced to $61.9 million.

Technology Programs

The Superfund Act (Section 311) established the SITE program and directed EPA "to carry out a program of research, evaluation, testing, development and demonstration…of innovative treatment technologies." (Sec 311 (b)(1)). After significantly downsizing the program in FY06, EPA proposes eliminating it in FY07 and has again proposed its elimination in FY08. By all accounts, including EPA's own, the SITE program has conducted high-quality field demonstrations of remediation technologies, and there are many SITE evaluated technologies now on the market that have saved money and led to more effective remediation efforts.

The budget also proposes to eliminate the Environmental Technology Verification program. ETV was created in the mid-1990s to help technology developers verify the performance of their products in areas other than remediation technologies. It was developed using SITE as a model. The FY08 request would eliminate the remaining $3 million in funding that the agency has used to partner with technology vendors to test the performance of their products.

Sustainability Research

EPA's Science and Technology for Sustainability program is designed to advance sustainability goals, specifically in the areas of air, ecosystems, energy, land, materials, and water. The Office of Research and Development's Sustainability Research program (formerly called the Pollution Prevention Research program) would receive a $3.6 million or 14 percent decrease in FY08 ($22.5 million) from the FY06 enacted level of $26.1 million.