ments (SN: 11/3/90, p.277). The agency's radon-mitigation research program would also climb steeply in the coming year - 42 percent, to \$5.1 million. Superfund activities would climb 5.2 percent in the new year, to \$1.75 billion. And EPA's program for investigating the neurotoxicity of poisonous chemicals would increase 2.9 percent, to \$26.8 million.

The President proposes a 32 percent increase - to \$812 million - for federal programs aimed at conserving wetlands. The new budget would also increase funding by 47 percent, to \$42 million, for programs to develop what the White House calls "environmentally benign"

Biomedicine/biotechnology: The new budget proposal includes a \$4.03 billion program to coordinate and spur biotechnology advances in agriculture, energy, the environment and health care across 12 federal agencies. This would represent a 4 percent increase in total spending for biotechnology.

In the health budget, the Centers for

Disease Control would receive the largest percentage increase - roughly 5 percent, to \$1.64 billion. The increase would help boost the number of children who receive immunizations against childhood diseases (\$349 million total), prevent lead poisoning among children (\$40 million total), pay for routine mammograms and Pap smears for low-income women (\$70 million total) and stem the recent surge in drug-resistant tuberculosis (\$40 million total). CDC's spending on AIDS research and prevention would increase 2 percent, to \$505 million. AIDS spending across all federal health agencies would total \$2.07 billion in 1993.

The President's budget plan for the National Institutes of Health includes a 2 percent increase for research grants, spread fairly evenly over all biomedical fields. The proposal would fund 5,800 new and competing research grants - about 200 fewer than funded this year.

Energy: Energy Secretary James D. Watkins attributed his agency's meager budget request both to the congressionally imposed spending cap and to a

reduction in "pork barreling." A slated 12.3 percent cut in the department's defense-related R&D allows some other programs to grow. For instance, naturalgas research would jump 230 percent, to \$40 million. Other winners include alternative-fuels research - up 85 percent, to \$32 million. But fossil-fuel R&D would fall for the second year in a row, down 7.7 percent to \$825.2 million. And programs aimed at reviving the nuclear-power industry would fall almost 9 percent, to \$344.7 million. High-energy and nuclear physics programs would remain essentially flat at \$984 million, while biological and environmental research would rise 9 percent, to \$384.7 million.

- R. Cowen, J. Raloff and staff reports



Artist's conception of space station.

\$169.9 million, solar energy funding shows a hefty 32.7 percent increase. Though Congress again quashed the President's efforts to severely limit coal research, its inflation-adjusted appropriation for fossil-energy R&D (including coal) still falls 10 percent below fiscal 1991 levels.

While many researchers have criticized Space Station Freedom, saying it holds little scientific merit and will siphon scarce funds from other space science projects, Congress awarded this program the full \$2 billion the President had sought - an increase of 2.5 percent. However, budget constraints forced NASA to kill plans for a solar observatory and a satellite-based biomedical research program called Lifesat.

Austere appropriations imposed a one-year delay in plans for several missions, including an orbiting X-ray telescope and the Cassini mission to Saturn. Congress also capped support for NASA's Earth Observing System designed to monitor climate changes from space - at \$11 billion through the year 2000. Lawmakers called for a review of the program to ensure it could provide needed data to research - R. Cowen agencies.

Federal R&D budget: Looking good in '92

Despite a recession and an overall 4 percent cap on increases in discretionary domestic spending, federal research agencies fared remarkably well in the budget that Congress appropriated last fall for the 1992 fiscal year, which began last Oct. 1. Lawmakers allocated \$74.6 billion for R&D, a 6.8 percent increase over the fiscal 1991 budget after accounting for an estimated 4.2 percent rate of inflation.

Political battles and financial compromises that shaped the current year's R&D budget began a year ago, when President Bush outlined his blueprint for federal spending (SN: 2/9/91, p.87).

Bucking a recent trend, Congress boosted defense R&D more than it did civilian research spending, Albert H. Teich and his colleagues note in the American Association for the Advancement of Science's annual budget analysis, released last month. The \$44.1 billion for defense R&D represented a 6.9 percent jump, after accounting for inflation – and 1 percent more than the President had requested. It includes \$4.15 billion for the redesigned Strategic Defense Initiative, up \$1.2 billion from fiscal 1991. By contrast, civilian R&D received \$30.8 billion, 1 percent less than the 5.5 percent increase Bush requested.

Nearly every agency received R&D increases - which usually exceeded inflation and often matched the President's blueprint. The National Science Foundation emerged as a key winner, with an inflation-adjusted R&D increase of 11.9 percent. (The administration had sought an even heftier hike, but lawmakers shifted some proposed R&D funds to NSF education activities.)

Even many "losers" showed a modest increase. Amid criticism over several space agency programs, including development of new weather satellites and Space Station Freedom, NASA's spending limit rose to \$8.6 billion - 0.9 percent beyond inflation, but nearly 11 percent less than Bush had proposed.

Adjusting for inflation, Congress gave the National Institutes of Health (NIH) a 5 percent R&D increase, about \$200 million more than the President sought -but with a catch. NIH can't spend \$563 million, or 6 percent of its total budget (including items other than R&D, such as salaries), until Sept. 30, the last day of fiscal 1992. The maneuver effectively pushes spending of that sum into fiscal 1993. Congress imposed this constraint to ensure that the Department of Health and Human Services, which includes NIH, will not exceed its fiscal 1992 budget ceiling.

Among big winners in the NIH budget: Research on aging won a 20 percent increase over the 1991 level (mostly for Alzheimer's disease studies); support for cancer research jumped 16 percent; and funding for NIH's portion of the Human Genome Project increased 21 percent, to \$105.3 million.

Among Energy Department programs, Congress more than doubled spending on the Superconducting Super Collider. However, this \$473.7 million total constitutes some \$49 million less than the President requested. At

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