

EPA Drafts New Research Agenda

"We must develop the capabilities to anticipate and prevent pollution, rather than simply controlling and cleaning it up after it has been generated." So writes Erich Bretthauer, acting chief of research and development at the Environmental Protection Agency (EPA), in a radical proposal to overhaul environmental science in the U.S. government.

Bretthauer describes a plan to boost support for basic science in a 70-page draft paper that has been obtained by *Science*. Entitled "Protecting the Environment: A Research Strategy for the 1990s," it was prepared this spring in response to recommendations made by a group of outside advisers to EPA.

EPA Administrator William Reilly has seen this report, and, like his predecessor Lee Thomas who commissioned it, he is said to favor its goals. But he has not endorsed it. Nor has the White House, which would have to defend the increased EPA budget.

The outsiders who urged EPA to beef up the research program belong to a subcommittee of the agency's Science Advisory Board, a group chaired by Alvin Alm, a former policy-maker at both the Department of Energy and EPA who was recently made an executive at SAIC Inc., a Washington, D.C., consulting firm. The Alm committee wrote last year that the government ought to double its funding of environmental research in the next 5 years and put more emphasis on investigator-initiated projects (*Science* 23 September, p. 1596).

Alm says the price for increasing fundamental research, or "core" research as he suggests, would be about \$70 million each year, climbing to a level of \$400 million 5 years hence: "Not a hell of a lot in the context of the total EPA budget of \$5 billion," he claims. The Administration this year proposed increasing EPA's research budget by \$33.6 million. According to a congressional staffer, this indicates that

White House budget planners are willing to go along with the increase, although they would stretch the doubling period out to 10 years.

EPA has become too inward-looking, the Alm panel found, and needs to liberate itself from its role as a regulator. It must develop a broader perspective and learn to ask questions about the environment that have not been asked before. One way to do this, the Alm panel suggested, would be to create a new institute for environmental research which would focus on novel, preventive, and anticipatory research.

The Bretthauer report says that the old approach, which it labels "end-of-the-pipe" cleanup, has improved local conditions in many places but has not helped the nation identify or control the really big problems in advance—the kind that accumulate slowly over the decades and gradually erode the fabric of "ecosystems that form the basis for life on this planet." In this category are such effects as the acidification of freshwater lakes, the slow death of evergreen forests, the depletion of stratospheric ozone, pollution of estuaries leading to massive fish kills and toxic tides, the buildup of greenhouse gases, and the growing threat to marine mammals.

To help develop a long-term perspective, the research office proposes a "core" program with studies in four subdivisions: human health risks, ecological risks, risk reduction methods, and basic research grants. It does not say this work should be managed by a new environmental institute but it does indicate that a goal in the grants program will be to foster "a significantly larger, more stable source of funding for investigator-initiated grants and to expand our support of academic centers."

Some priorities are ranked by importance. The report says EPA should:

- Create a nationwide Environmental Monitoring and Assessment Program to collect baseline and trend data on major ecosystems and the deleterious effects of pollution.

- Fund long-term research in cooperation with industry aimed not just at preventing pollution through the use of mechanical devices, but also through education.

- Develop a national database on the extent and the effects of human exposure to pollutants.

- "Substantially increase support for the growth and maintenance of an academic environmental research community," paying for more peer reviewed projects and creating new study centers.

- Make a concerted effort to understand the synergistic and additive effects of pollutants, particularly at low levels of exposure.

■ ELIOT MARSHALL

Cambridge to Oversee Animal Research

The Cambridge, Massachusetts, City Council voted this month to appoint its own commissioner to oversee the treatment of research animals. It is now drafting a detailed ordinance for final approval later this summer.

The measure is less Draconian than it may sound for the commissioner will have limited powers. The ordinance will merely add another layer of inspection on top of those already carried out by the Department of Agriculture and the state of Massachusetts, and the new commissioner will have no veto power over research.

The measure is a compromise following about 2 years of agitation by an antivivisection group, the Cambridge Committee for Responsible Research, that has been pressing for more extreme measures. The organization wanted the city to have the power to veto research deemed inhumane and sought representation by animal rights activists on all institutional committees that oversee research involving animals.

But the rightists failed to get what they wanted from the three-person committee advising the city council, even though that committee included a lawyer for the animal activists. The other two members were a veterinarian and John M. Moses, director of the animal care committee at the Massachusetts Institute of Technology. Jane Corlette, director of government relations at Harvard, says the committee, after a yearlong investigation, found no problems with animal care either at local universities or private research institutions—with the exception of a fight between two mice, and a sick mouse whose care had been delayed because the veterinarian happened to be the same one appointed to the committee and had been simply too busy with committee duties.

Following the committee's recommendations, the council approved a measure providing for a part-time commissioner knowledgeable about animal health and psychology who must be neither an activist or researcher. He or she is to conduct annual inspections of facilities to determine compliance to federal regulations and guidelines. Private research outfits are also required to have animal care committees like those required for federal grantees. Corlette says they already have them.

Moses says the only departure from federal requirements is that inspections will also cover the care of rats and mice, which are not covered by the federal Animal Welfare Act. He says local universities already conform in this respect, but this may add some paperwork for local biotechnology firms.

■ CONSTANCE HOLDEN