sibility of a showdown with Houston, the state's largest and most politically potent city. Houston has spent about $75 million over the past 6 years on improving its sewage collection and treatment facilities, but this improvement effort was retarded in 1968 by the voters' rejection of two large public works bond issues.

To catch up with the need for sewage facilities the city must spend perhaps as much as another $100 million, and, should the voters not approve the new bond issue currently proposed, a crisis may ensue. Fulcher observes that, if Houston or any other city refuses to clean up its domestic wastes, the board will seek a court order requiring such action and raising sewer service charges sufficiently to pay for it. "We will do whatever it takes," he says. The legislature, he adds, should assist the cleanup by appropriating money for state treatment facility grants, without which Houston and other localities have been unable to qualify for the maximum federal grants.

The Water Quality Board will be in a stronger political position to deal with recalcitrant municipalities and industries if Texans know that the failure of the state to accomplish a cleanup will only mean that federal authorities will come in and do the job. FWPCA will be able to play this supporting role better if Congress goes along with the proposals made last week by President Nixon—and made earlier by Senator Edmund Muskie of Maine—to broaden the agency's powers.

The President asked that FWPCA be given authority to approve or reject state quality standards for effluents as well as for receiving waters; and, further, that it be authorized to initiate enforcement actions even in situations where, as in the case of the Galveston Bay system, no interstate waters are in-

NASA: Further Cuts in University Support Spending

The National Aeronautics and Space Administration last week called in university administrators to explain how cuts in the space agency budget will not only slow the pace of the space program but also the education of space scientists.

The most dramatic cut in university support is the termination of the Sustaining University Program (SUP). At its peak in 1966, this program gave $45 million to about 175 colleges and universities for R&D and training. Now the $7-million program of 1970 will be terminated in fiscal 1971, which begins 1 July (see Table 1).

A total of $21 million will be cut by NASA in contracts and grants to universities. The cuts are distributed across the offices of NASA, but the chief target seems to be graduate training, with the justification that fewer scientists will be needed in the future.

The cuts in SUP will eliminate more than 200 predoctoral training grants, which had been funded at $4.18 million. Other graduate students, researchers, and even whole space science departments had been supported on many campuses through grants for multidisciplinary research; this funding will also end.

The students will not be cut off immediately, however. The SUP grants have been step-funded, so that an individual grant will be reduced by steps over 3 years.

F. B. Smith, assistant administrator for university affairs at NASA, held out the possibility that other agencies could take over the funding of some of the grants, since university R&D funding in the total federal budget will increase by $114 million in 1971.

Table 1. NASA obligations to universities. Figures are expressed in millions of dollars.

	Office of Space Science and Applications	Office of Advanced Research and Technology	Office of Manned Space Flight	Sustaining University Program	Other	Total
1969	56	23	36	9	6	130
1970 (est)	48	19	33	7	4	111
1971 (est)	40	17	30	0	3	90

But the prospect of other agencies picking up the discontinued programs seems fairly dim. Most agencies were victims of similar cuts; of those which received increases, neither the Agriculture Department nor the National Institutes of Health seems likely to be interested in training space scientists, and the National Science Foundation is already beleaguered by cries for funds. The Defense Department, which has an interest in space programs, is facing restrictions on its R&D funding as a result of the Mansfield amendment, limiting research to defense areas only (*Science*, 12 Dec.).

Lee A. DuBridge, the President's Science Adviser, admitted that the additional $114 million would not make up for the leveling off of R&D budgets in the past few years, nor for the effects of inflation.

DuBridge noted that government support for graduate students is declining generally. Without elaborating, he said that the government does not require as many scientists as previously.

Cuts in other NASA programs will also hurt graduate students. In the Office of Space Science and Applications, university R&D grants will be cut in bioscience by 30 percent; in the areas of physics and astronomy, the cuts will eliminate a high-energy astronomical observatory.

In the Office of Advanced Research and Technology, there will be a 30 percent reduction in university R&D, chiefly affecting research in electronics and space vehicles. And in the Office of Manned Space Flight, contracts for the Apollo program with the Massachusetts Institute of Technology will be cut by $2 million.

The grants and contracts with universities which survive the budget cuts will be oriented differently than before, Smith said. The emphasis will be not on what NASA can do for the university, but on what the university can do for NASA.

For example, the SUP summer faculty fellowship program has in the past brought faculty members to NASA centers to work on projects. Those centers which have benefited from the program will be asked to fund it in the future, and the emphasis will not be on scientific training but on contributions to NASA.

—NANCY GRUCHOW