has agreed to administer the program; the institute is currently hunting for a nonwhite program director.

Last month, the GSA took the first step toward raising money for the fund with a letter to its 8000 members requesting donations. The committee hopes this will bring in about $10,000, and, with this in hand as earnest money, the AGI and GSA will begin knocking on corporate and foundation doors with the expectation of raising another $200,000 or so for the first year. One small foundation has already pledged $25,000 but industrial support—a key determinant of success or failure—remains an open question. Perhaps significantly, the only evident reticence to the whole plan has come from within the Society of Exploration Geophysicists (SEG), whose leadership is dominated by conservative oil and mining executives. On the other hand, several large petroleum and mining corporations have expressed an interest in helping the fund.

To a large extent, the recent burst of interest in minority education in the earth sciences stems from dedicated prodding by a handful of influential figures, notably Louis C. Pakiser, a geophysicist with the Geological Survey; Clyde A. Wahrhaftig, a professor of geology at the University of California, Berkeley; and William Bromery, at the University of Massachusetts.

All three have long been involved in minority education projects—for the most part small, personal efforts to interest high school students and entering freshmen in becoming science majors. In September 1970 Pakiser, Wahrhaftig, and several other scientists in the San Francisco Bay area gave the national bandwagon its initial shove by circulating petitions around the country exhorting the GSA and the SEG to begin actively encouraging an influx of minorities into the earth sciences. That November, the two societies' governing councils endorsed the petitions' intent; five other societies have since adopted "supporting positions."

A year later, in September 1971, the spirit had spread to the Geological Survey, where acting director William Radlinski was moved to issue a memo declaring in part that the Survey would grant its employees official sanction, working time, and money "insofar as our mission permits" to engage in minority education and training programs of their own design. Special funds set aside for these programs, above and

Agnes Imperils Chesapeake Bivalves

Tropical storm Agnes, which in late June engendered the worst floods the East Coast has seen in this century, made a shambles of the Chesapeake Bay. But, although it was polluted by silting, garbage, and chemical runoffs, scientists say there is little danger that the bay will sustain any long-term ecological damage.

On the surface, the bay has presented a wild scene for the last couple of weeks, with huge islands containing trees, telephone poles, and 200-gallon gas containers (torn from dwellings on the shores of the Susquehanna) floating to and fro over the thick, muddy, swollen waters.

The debris is now being cleared away, but considerable chaos still reigns below. The bay has been declared off limits for swimmers, and shellfish beds are closed to fishermen, primarily because large amounts of untreated sewage, carried by the floods, have been pouring into the bay.

Swimming will probably be all right by the end of the month, but the damage to the shellfish population—primarily to the mussel, the clam, and the famous bay oyster—is serious, although not yet calculable.

The shellfish are in trouble from three directions: they have been rendered inedible because of sewage, pesticide runoff, and the stirring up of heavy metals. Many communities of shellfish have been smothered by the silt that was washed down from the bay's tributaries and that has settled at the rivers' mouths. Most important, many have died, or will die, because the salt content of the water is too low.

Indeed, salinity is the bay's most extensive problem now, according to Eugene Cronin, director of the University of Maryland's Natural Resources Institute. Near Solomon's Island, where the university has a marine laboratory, the concentration of salt in water is usually 14 parts per 1000; however, since the flood, the concentration has been 2 or 3 parts per 1000, which is several parts per 1000 fewer than what oysters need to survive. Because mollusks can hermetically seal themselves in their shells for a couple of weeks when the saline concentration gets too low, their mortality rate cannot yet be determined. (The Solomon's Island laboratory has scooped up its special stock of brood oysters and put them in a refrigerator, where they will keep a few more weeks.)

The outlook for the oyster crop is uncertain. Harvest time is not until September, but spawning time had just begun when the storm hit, and scientists do not know how well the larvae will fare.

Economically speaking, the hardest hit have been the clam fishermen, who were ordered out of the water at the peak of clamming season. Crabs and finfish appear to be doing all right because of their mobility, but many other creatures, such as sea anemones, worms, and surface organisms, have perished as a result of decreased salinity.

The good news, says Cronin, is that all of the oyster's major predators have been flushed out to sea, and sea nettles, the scourge of bathers, will be seen no more this season.

Because the flooding is unprecedented—Cronin says the flow from the Susquehanna, the bay's main artery, was 50 percent greater than it was during the last big flood, in 1936—scientists are not sure just what is happening or how marine life is being reshuffled. Cronin estimates that, if this summer's heavy rains ease off, the bay environment will be back to normal in about 3 months, although it may take years for some of the bay's noncommercial species to resume their pre-flood distribution.

Meanwhile, the Virginia Institute of Marine Sciences, the University of Maryland, and the Chesapeake Bay Institute of Johns Hopkins University have thrown themselves into a flurry of research projects in their respective domains (Maryland encompasses the upper bay, Virginia the south portion). Aided by emergency logistical and financial support from various government agencies, the three institutions are rigorously sampling and monitoring the physical, chemical, biological, and hydrographical conditions the tempest created. As one scientist said, "It's a disaster, but also a research opportunity."—CONSTANCE HOLDEN