Water Pollution: Control Program Lags as Nixon Promises Cleanup

President Nixon has pledged to make environmental quality a priority objective of his administration and this week, in his State of the Union message, he addresses himself again to problems of the environment. Water pollution is one of the most serious of these problems and pollution control efforts are beset with serious delays and obstacles.

Although federal legislation providing for abatement conferences and treatment facility grants goes back to 1956, the present strategy for dealing with the water pollution problem is embodied in the Water Quality Act of 1965. This measure, reflecting the complexities of a federal system and the political influence of the states, has established a framework of federal law and regulation within which each state is to protect the interstate and coastal waters under its jurisdiction. The act provided for the states to adopt water quality standards, which were to be subject to federal review and approval; but these standards were to be enforced by the states themselves unless federal help was requested or unless a state failed to carry out its enforcement responsibilities. In cases of pollution occurring within a single state, the federal government was to have authority to undertake enforcement action only at the request of the governor of that state or upon finding that shellfish beds were being contaminated.

In adopting water quality standards the states were to classify waters according to the uses made of them; to establish the quality criteria (for dissolved oxygen, temperature, acidity, and the like) appropriate to the use-classifications; to fix an "implementation schedule" by which polluters, whether industries or municipalities, must provide (by not later than 1975) for the "best practicable treatment" of their effluents; and, finally, to be ready to enforce the standards.

Passage of the Water Quality Act in 1965 was followed the next year by legislation authorizing $3.4 billion in appropriations over a 4-year period for matching grants for the construction of waste treatment facilities. But actual appropriations for such grants were modest until this past year when Congress provided $800 million, largely in response to a clean water crusade in Washington and at the grass roots by conservation groups, labor unions, and organizations such as the National League of Cities and the League of Women Voters.

The Nixon administration has been debating within its own councils whether to spend the $800 million or to help localities build treatment facilities by paying off the principal on their future issues of bonds for such facilities. The President's Pollution Control Advisory Board last week recommended that the $800 million be spent. But, while heavy expenditures for treatment facilities are essential to the success of any strategy for pollution control, the administration fears that either a massive program of federal grants or a bond-financing plan can be expected to add to the inflationary pressures which it is trying to combat.

All 50 states now have water quality standards that have been approved at least in part by the Secretary of the Interior. But, despite repeated urging from Washington, only 14 states* (as of mid-January) have standards which the Federal Water Pollution Control Administration (FWPCA) has not found deficient in one way or another. For example, nearly half the states have not yet agreed to protect waters already of high quality against any degree of degradation. And some states have adopted standards considered too permissive with respect to certain quality criteria.

Many municipalities and industries

* On this short honor roll are Arizona, Arkansas, Florida, Minnesota, Montana, Nebraska, Nevada, New Mexico, Oregon, Texas, Utah, Washington, Wisconsin, and Wyoming.

POINT OF VIEW

DuBridge Discusses Basic Science

On 1 November Lee A. DuBridge, Science Advisor to the President, addressed the annual meeting of Sigma Xi at Palm Springs, California. He discussed the general state of federal-science relations and, in the following passage, described the effects on R & D of pressures on the federal budget.

When the Nixon Administration assumed office in January 1969 it became evident that the balancing of the federal budget and the control of inflation was its most important task, next to renewed efforts to end the war in Vietnam. Nevertheless, the Nixon budget submitted to the Congress proposed that in spite of all these pressures the 1970 budget for *basic academic science* should be maintained at or slightly above its fiscal 1969 level.

Unfortunately, the Congress appears not to agree with this proposal. Although most of the appropriations bills have not been finally passed, it is very clear that painful cuts in the Nixon science budget will be imposed. The Administration will try again in fiscal 1971, but the Congressional attitude is not particularly encouraging. The Congress seems even unwilling to adopt a tax bill which will maintain adequate federal revenues.

Herein, of course, lies the basic issue. The members of the Congress presumably reflecting the opinions and interests, or lack thereof, of their constituents are apparently not convinced that the continued growth and virility of basic science in this country is essential to the national interest and to the national welfare. At the very least, they seem to be saying that, in times of budget restrictions, scientific research seems less urgent and more deferrable than other matters.

have failed to meet the initial deadlines, such as those for the designing of treatment works and the letting of contracts, fixed by the abatement implementation schedules. But even FWPCA officials in Washington are not fully informed as to how well or badly the schedules are being observed, although reports on compliance are now being compiled by FWPCA's regional offices and submitted to headquarters. A box score available for the Great Lakes and upper Mississippi region, for example, shows that, while some cities and industries are meeting their deadlines, others are a year or more behind.

In September, Secretary of the Interior Walter J. Hickel, using for the first time the "180-day notice" procedure available to him under the Water Quality Act, directed FWPCA to hold early hearings on violations of water quality standards and abatement schedules by the City of Toledo and four steel companies polluting Lake Erie tributaries in Ohio. He declared that if these polluters failed to take steps within 180 days to clean up their effluents, they would be taken to court. A mining company charged with polluting the Spring River in Kansas and Oklahoma was named in a similar proceeding.

"This is just the beginning," the Secretary said at the time. "We intend to continue the identification of polluters all over the nation, followed by the enforcement of schedules for prompt cleanup." However, at this writing, no further 180-day notice proceedings have been initiated. A sense of caution may have been imparted when the proceeding against Toledo and the steel mills promply led to a shouting match between two good Republicans, namely, Secretary Hickel and Governor James Rhodes of Ohio.

Many delays in the construction of treatment facilities are said to be due not to recalcitrance but to difficulties in financing, delays in equipment deliveries, and shortages of skilled labor —problems which can arise in any large-scale construction program. And, of course, no improvement in water quality takes place until construction of a treatment facility is completed and the last switch is thrown. "We're doing the biggest plumbing job in the country," says Murray Stein, FWPCA's Assistant Commissioner for Enforcement. "Ask any housewife how long it takes to get her plumbing work done." Stein believes that most polluters are now making a good-faith effort to clean up.

In November, the U.S. General Accounting Office (GAO) reported that in numerous cases a city or town has improved its waste treatment facilities only to have this offset by increasing discharges of untreated or inadequately treated wastes by industries or other cities on the same watercourse. One objective of the Water Quality Act and the waste treatment grants program is to encourage the development of regional facilities but this goal has been elusive. The GAO accused FWPCA of following a "shotgun approach" in making construction grants. FWPCA Commissioner David D. Dominick says, however, that his agency lacks the authority to require grant recipients to provide facilities according to a regional or river-basin pollution abatement plan.

Given their complexity, problems of water pollution control are not easily understood apart from a discussion of specific situations. Illuminating examples probably can be found in many parts of the country, but the pollution problems besetting the Houston Ship Channel and Galveston Bay, being among the nation's worst, are worthy of a special analysis in a later issue of News and Comment. These problems will be discussed in the context of the larger problem of protecting the Galveston Bay system from the manifold threats arising from population growth and economic pressures.

As for the water pollution problem nationwide, the Nixon Administration may find it difficult to cope so long as inflationary pressures continue. At the moment, President Nixon appears to feel that he is in a dilemma, with his choice being between more inflation on the one hand and more pollution on the other.—LUTHER J. CARTER

"Book Bugging": A Possible Answer to Library Thefts?

With losses from book thefts mounting yearly, university and public libraries are installing theft-detection systems in an effort to keep a tighter rein on library collections.

The London *Times* reports that the new $8-million Birmingham, England, city library has plans to have every book in its collection "bugged," by 1971, with magnetized metal strips which will set off a bell or light when a thief tries to abscond with a book.

Libraries in the United States report losses ranging from $1000 to a half million dollars yearly. They, too, are seeking to minimize forays by installing theft-detection devices. The Yale University Medical Library and the Western Michigan University Library, for instance, are two of the perhaps half-dozen university libraries in the country that are known to be experimenting with "bugging" systems.

How do these "bugging" systems work? The detectors vary, but all operate on somewhat the same principle. A device—usually electronic, magnetic, or chemically sensitive—is hidden in the books and must be desensitized, removed, or screened by the librarian when the volume is checked out of the library. When a would-be thief attempts to remove a book unofficially, a light, buzzer, or screen signals the librarian.

Three library theft-detection systems are currently being marketed in the United States and are being used in public and university libraries. Users report that these systems slow down thefts, but none are described as foolproof against the clever pillagers. The American Library Association (ALA), which has done some research on these theft-detection systems, indicates that the detectors do not always work. One spokesman reports that some of the detection systems have been known to give false alarms triggered by umbrellas