

significant increase in the number of integrated pulp and paper mills involved in such studies. This is particularly true in Maine and New York. Most of the feasibility and rate studies are not far enough along to permit an analysis as to projected costs or financing procedures. The bulk, however, are predicated on providing secondary treatment in line with actual needs or regulatory policy.

Some aspects of these new studies merit extended attention, and I would therefore spend the remaining time dealing with these.

IMPACT OF STATE AND FEDERAL CONSTRUCTION GRANT PROGRAMS

In nearly every case where the proposed use of public facilities involves new treatment plant construction, construction grants figure very prominently. Out of a sampling of 22 projects for which we have detailed data (involving 33 mills), the minimum authorized federal support grant of 30 percent is referred to in seven cases, or for 33 percent of the projects. As a practical matter, it seems doubtful that such aid will fully materialize unless the federally budgeted funds for this purpose are increased or the Department of the Interior finds some alternate pay-as-you-go method for financing construction. Such an approach is under consideration by the Bureau of the Budget, by which the federal government would commit itself to pay the yearly principal and interest on local project bonds until its authorized commitment was met.

An equal third of the projects, principally in New York State, anticipates 60 percent construction grant support. These would consist of a 30 percent state Pure Waters Program grant and an equal 30 percent federal grant prepaid, however, from the available state program funds until the state can be reimbursed from Washington.

A few projects in New York, Maine and Massachusetts hope for in excess of 70 percent grant assistance, assuming both federal and state support, as well as a bonus for qualifying under comprehensive river basin abatement programs.

USE OF EDA—DISTRESSED AREA DEVELOPMENT GRANTS

Several projects have qualified for large EDA grants through the U.S. Department of Commerce distressed area assistance program. These involve a total of six mills at Grand Rapids, Minnesota, Lincoln, New Hampshire, and Monroe, Michigan.

(1) *Grand Rapids, Minnesota.*—The first of these will permit construction by the village of Grand Rapids of a \$1.3 million chemical coagulation and sludge dewatering installation handling 11 MGD, with 80 percent of the capital cost met by EDA. The mill will meet the remaining capital charges, as well as the operating costs, on a fixed contract basis.

(2) *Lincoln, New Hampshire.*—The Lincoln project is of interest in that it will involve installation of a Copeland fluidized bed unit for burning of evaporated spent sulfite liquor, as well as a conventional treatment plant for white water, weak pulp mill wastes and municipal sewage. The entire project will cost \$4 million, with EDA contributing \$1.75 million, mainly for the liquor system, New Hampshire, \$1.3 million, mainly for sewer and treatment plant construction, the Town of Lincoln, \$0.2 million, and Franconia Paper, \$0.8 million for internal liquor collection and sewer modifications. The Copeland unit will be located at the mill, and leased by its owner, the Town of Lincoln, to the mill.

(3) *Monroe, Michigan.*—At Monroe, the city sewage plant is being expanded to 24 MGD capacity including activated sludge treatment at a cost of \$7.75 million, with the help of a 50 percent EDA grant. The new facility will have sufficient capacity for treatment of effluent from four local paperboard mills.

While the number of locations that have benefited from this public aid program is quite limited, it is of interest that effluent treatment costs have been recognized as economically burdensome to a degree sufficient to warrant some form of relief under the EDA program.

SPECIAL FEASIBILITY STUDIES

At least three technical feasibility studies are now in progress designed to provide data both for design and rate determination for proposed projects at Macon, Erie and Green Bay.

(1) *Macon, Georgia.*—The Macon project involves the Macon Water Board, Georgia-Kraft and Armstrong Cork, and may result in a 15 to 20 MGD plant providing activated sludge treatment. A small-scale continuous treatment unit