

Other studies will include water quality measurements and research to learn the tolerance of shad in egg and larval stages to such factors as water chemicals and temperature.

This year's studies are part of a 30-month research program financed by electric utility companies at a cost of \$196,500.

The program began in May 1963 with the planting of 200,000 fertilized shad eggs in hatching boxes at Clarks Ferry, Pennsylvania. Approximately 11 million additional fertilized eggs from the Columbia River were later planted at several points along the river to determine if shad eggs would hatch in polluted sections of the Susquehanna.

James T. McBroom, chairman of the Administrative Committee for the study, said some young shad have been observed downstream from the hatching sites, but the results still are not conclusive. McBroom is an Assistant Director of Interior's Bureau of Sport Fisheries and Wildlife, Fish and Wildlife Service.

Additional research during the next two years will include water quality analysis, young shad survival, downstream migration of young fish, and behavior of transplanted adult shad.

McBroom said that until results of the studies are known, no conclusions can be reached about the ability of shad to survive and reproduce in the upper Susquehanna. He added that the financing of the fishery research project by private utility companies is a conservation milestone.

Representing the participating utility companies at a recent meeting of the group in Washington, D. C., were Stanley Moyer, Philadelphia Electric Company, and Dr. Edward C. Raney, fisheries consultant for the companies. Other power companies aiding the program are the Pennsylvania Power and Light Company, the Metropolitan Edison Company, and the Safe Harbor Water Power Corporation.

In addition to McBroom, other members of the project's Administrative Committee are Albert Day of Pennsylvania, Dr. L. Eugene Cronin of Maryland, Donald Pasko of New York, and Mitchell Hanavan, Bureau of Commercial Fisheries, Department of the Interior.

Serving on a special Technical Federal-State Committee for the research project are Robert Bielo of Pennsylvania, Dr. Frank Schwartz of Maryland, Mr. Pasko, and Dr. Wendell Johnson and Paul Nichols of the Fish and Wildlife Service. Nichols is chairman of the Technical Committee.

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