

## CHAPTER IV

### FINAL REPORT OBJECTIVES

The overall project objectives have been specified in Chapter I. In discussing the objectives sought in the preparation of this final report, mentioned should be made of its contractual requirements:

- a. the final report shall outline an overall plan of abatement for all mine drainage pollution from abandoned mines, and present recommendations for abatement procedures.
- b. it shall list quick start projects which are obvious necessities for pollution abatement as soon as they are defined.

After analyzing all the data that was accumulated over a 15-month sampling period, it became quite apparent that the upper West Branch was a unique area in terms of amenability to the application of simple standard abatement procedures. Therefore, the mode of development of the basic data in this report is quite different from that which has been used in other mine drainage studies. More emphasis has been placed upon engineering analyses of all relevant data in order to arrive at the most logical and economically sound recommendations for action.

### TYPES OF OVERALL PLANNING TO BE CONSIDERED

Three types of overall planning for the West Branch headwaters area are possible but have varying degrees of economic and aesthetic importance:

1. planning to restore a major portion of the upper West Branch above Bower Station as a recreational stream (particularly for fishing).
2. planning to protect the recreational waters of Curwensville Reservoir, with or without restoration of the upper West Branch.
3. planning to protect the waters of the West Branch below Curwensville Dam from catastrophic acid pollution such as occurred in 1970, with or without consideration of the upper West Branch and/or Curwensville Reservoir.

The study data were analyzed from the standpoint of developing all three types of overall abatement plans. However, the data is overwhelming in proving that Type I is attainable only at costs which are completely unjustifiable, whereas Types II and III can be attained at essentially no additional cost (over the present costs of treatment at the Duman plant) if slightly unorthodox, natural abatement methods will be given full consideration.

## MAIN REPORT OBJECTS

The main objective in the preparation of this report, therefore, is to develop all of the information obtained in this study in forms which clearly delineate the conditions and alternatives involved in the consideration of each type of overall abatement planning. The important characteristics of each major pollution element (together with their benefits or limitations) are defined in the basic data chapters. These important factors are reviewed and analyzed in the Summary Chapter II (a) and recommendations for action, based upon the degree of ecological and economic need in the study area, are made in Chapter II (b).

Finally proposals for quick start projects through which the final recommendations may be implemented are described briefly in Chapter II (b) and are more completely detailed in Chapter X.

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