RECOMMENDATIONS

1. Initiate the necessary investigations to determine pipeline losses that contribute to the South-East Mine Pool Complex. Since pipeline losses include leakage from water mains as well as exfiltration from storm and sanitary sewers, cooperation between various State and Federal Agencies and local interests will be necessary to facilitate the recommended investigations. Joint-Venture participation will provide mutual benefits and facilitate implementation and enforcement of the required corrective measures.

2. Since present statutes or regulations of the Commonwealth do not prohibit the discharge of clean water into the deep mines, efforts should be made to enact new regulations and enabling legislation for enforcement to prevent such discharges.

3. Determine the magnitude of groundwater flow into the deep mines and evaluate the feasibility of groundwater interception by means of a Field Demonstration Project.

4. If groundwater interception appears viable as a source of water supply, initiate a dialogue with the Pennsylvania Gas and Water Company, the Public Utilities Commission, the Susquehanna River Basin Commission and the U.S. Bureau of Mines. Cooperation by these agencies in a multi-purpose solution to water supply and AMD problems in the coal. basin will provide benefits to all participants.

5. Implement the surface water loss prevention projects proposed for the Mill Creek watershed, as well as the previously proposed projects for the Solomon, Nanticoke and Warrior Creek watersheds.

6. Special consideration should be given to early construction of the proposed Upper Coal Brook Project. The entire surface runoff and stream flow in this area, amounting to 2.1 MGD, is lost to the SouthEast Complex, and is subsequently discharged as AMD. Construction of this project will complement the, recently completed "Zayre Strip Mine Restoration Project". Subsequent connection with the "Spring Run Flood Control Project" will provide additional multiple benefits to local and Commonwealth interests.

7. Encourage local interests to undertake the following actions that will benefit the area and facilitate the Department's AMD

abatement efforts:

a. Local ordinances should be enacted to prevent the discharge of raw sewage, storm drainage or industrial waste into strip pits or deep mines.

b. Encourage the Luzerne County Planning Commission to implement projects in the County Comprehensive Plan that deal with the conversion of abandoned strippings and waste banks to "higher and better" use.

c.Explore State and Federal programs relating to technical and financial assistance that may be available to the County for implementing the recreational and flood control aspects of its Comprehensive Plan.

d. Schedule and coordinate locally sponsored projects with the AMD abatement projects undertaken by the Department, to achieve maximum benefits to all parties involved.

8. Continue the present monitoring of mine pool fluctuations and the major AMD discharge points in the Wyoming Valley. The availability of continuous records will facilitate future correlation between water losses into the North-West Mine Pool Complex, water losses into the South-East Pool Complex, and the total AMD discharges in the Wyoming Valley that are related to these two major pool complexes. Moreover, continuation of the mine pool monitoring program will facilitate evaluation of the costs and benefits of reduced mine pool discharges, resulting from sequential implementation of selected AMD abatement projects.

9. Initiate a study to determine water losses into the North-West Complex. Results of the proposed study would supplement the completed studies and provide information that is essential to evaluate the priority of AMD abatement measures throughout the Wyoming Valley. Additional data is needed to determine the following:

a. The magnitude and interrelationship of the mine pool recharge sources.

b. The feasibility of abating AMD discharges from the Buttonwood Tunnel and the Plainsville Borehole outfalls.

c. The effect of the "at source" abatement methods on the quality of the Susquehanna River.
d. The feasibility of a water quality management concept as a partial solution to the AMD abatement in the Wyoming Valley.