

CORRELATION OF STREAM FLOWS WITH AMD DISCHARGES

Acid loads in the Study Area have been attributed to sixteen AMD discharges as described in the FWPCA Report. The location of each discharge is shown on Plate I.

The volumes and constituents of the AMD discharges have been presented in the FWPCA Report on the following bases: Design Average

Average daily AMD volumes and constituents during a year of normal precipitation.

Design Wet Weather

Average daily AMD volumes and constituents during high ground water periods caused by normal precipitation from December through April.

Design Maximum

Maximum daily AMD volumes and constituents resulting from the maximum twenty-four hour accumulation of rainfall occurring on the average no more than once in ten years

In order to meet the required acid reductions presented in Table 1, it is necessary to correlate flows and acid loads of each AMD discharge on the design bases described in the FWPCA Report with stream flows and acid loads in the Study Area streams and the Tioga River as reported by the Corps. Such correlation is needed to determine the extent of abatement measures, to design abatement measures, and to estimate their effectiveness.

In addition to the design bases established in the FWPCA Report, a fourth basis of design was selected to reflect the average daily AMD discharge volumes and constituents during low flow periods as established by the Corps in Study Area streams and the Tioga River. This condition has been designated as design low.

The correlation of AMD discharge design bases with stream flow in Study Area streams and the Tioga River is shown in Table 2.

TABLE 2
CORRELATION OF AMD DESIGN BASES
WITH STREAM FLOW

<u>Design Basis Of AMD Discharges</u>	<u>Equivalent Flow (cfs) (1)</u>	
	<u>Combined Study Area Streams (2)</u>	<u>Tioga River (3)</u>
Design Low	2.95	8.8
Design Average	12.5	130.0
Design Wet Weather	38.7	660.0
Design Maximum	64.7	2000.0

(1) As determined by Corps.

(2) Watersheds of Morris Run,
Coal Creek, and Bear Creek.

(3) At site of proposed dam.

Design AMD volumes and major constituents at each discharge point are presented in Exhibit A.