

**ASSESSMENT AND MANAGEMENT OF FLOOD
IMPACTS ON HEAD REACH
INFRASTRUCTURE OF PROPOSED CHINIOT
DAM**



by

Shahzad Yousaf
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Research Supervisor
Dr. Muhammad Masood

Center of Excellence in Water Resources Engineering
University of Engineering & Technology Lahore

ABSTRACT

The major sources of surface water available to Pakistan are perennial flows of River Indus and its tributaries i.e. Jhelum and Chenab Rivers. The Proposed site is known site to store water and to protect the surrounding areas from flood on the Chenab River in Pakistan. By creation of reservoir of 0.9 MAF storage Capacity will cause water level to raise and reduction in flow velocity. Consequently, will cause sediment deposition which would further increase the water level due to raised river bed level by deposited sediments. To achieve this storage at Chenab River, reservoir is to be modelled in HEC-RAS software to assess pre-dam and post-dam scenario by considering the inflow sediments towards the reservoir. The HEC-RAS model was used to simulate for different conditions of river flow for water surface profile and sediment delta modelling of the reservoir reach. The historical daily water and sediment flows (1985-2022) have been inserted in model to assess the pre-dam and post-dam scenarios. Water surface profiles with proposed reservoir and without reservoir were developed and the maximum water level at upstream training works of existing Talibwala motorway bridge were worked out against different historical floods. It is concluded that after creation of 0.9 MAF capacity reservoir, the average sediment inflow in the reservoir is worked out to be 38.4 MT compared with observed average sediment inflow at dam site which is 36.8 MT.

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