

Thesis

**FLOOD MANAGEMENT OF DEG NALLAH BY PART DIVERSION
INTO BASANTAR NALLAH**

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ABSTRACT

FLOOD MANAGEMENT OF DEG NALLAH BY PART DIVERSION INTO BASANTAR NALLAH

Economic growth in vast areas of district Sialkot, Narowal, Gujranwala and Sheikhpura has suffered serious set back due to hazardous floods in Deg Nallah. Thousands of acres of Paddy crop is damaged, industries on Sheikhpura Road are flooded, Roads and other infrastructure are shattered making life miserable for lakhs of people almost every year. The problem can be solved through effective management of Deg Nallah floods.

In this thesis it is proposed to manage Deg Nallah floods by diverting a part of its flood into Basantar Nallah for disposal into River Ravi. The study covers hydrological aspects of estimating floods in Deg Nallah, designing of a diversion structure across Deg Nallah and physical verification of the structure by a physical model at Hydraulic Research Station, Nandipur. By this diversion along with other works flood problem of Deg Nallah can be eliminated effectively.

A low crest weir structure was designed to divert 42% of Deg Nallah discharge into Basantar Nallah. Size and location of the structure was optimized through a number of tests at the model. Placement of the structure in the Nallah, crest level and widths of diversion and main weirs were optimized to effect a reduction of 167.63m (550 ft) in overall length of the structure and corresponding saving in the cost.