

THESIS

ANALYSIS OF MORPHOLOGICAL SCALE MODEL OF RIVER RAVI U/S
RAVI SYPHON FOR PROTECTION OF B.R.B.D. CANAL

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ABSTRACT

ANALYSIS OF MORPHOLOGICAL SCALE MODEL OF RIVER RAVI U/S RAVI SYPHON FOR PROTECTION OF B.R.B.D. CANAL

Hydraulic physical modelling is indeed an art based on science and has proved its practical utility over the years. Therefore scale model investigations are inevitable for water resources development projects-especially the river training and control schemes.

Generally, mobile bed river models are used in order to study morphological aspects of river training. In spite of common theoretical background the "state-of-the-art" varies, the world over.

For elaboration of the approach used in Pakistan, morphological model of river Ravi u/s Ravi Syphon for protection of B.R.B.D. canal was taken as a case and was blended with rich literature brief.

Model was constructed at Hydraulic Research Station (HRS), Nandipur of Irrigation Research Institute (IRI) at scale of 1:200 horizontal and 1:40 vertical. Model was run and calibration (conformation with the existing prototype conditions) was achieved.

Then various configurations and combinations of river training works (mainly spurs) were tried in order to;

- Deflect the course of the river away from the site of dangerous erosion (R.D. 288.5 of B.R.B.D.).
- Prevent oblique flow through the hydraulic structure (Ravi Syphon).

At last a special type of training works; a concavo-convex guide wall evolved out to be the best answer to the problem.

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