

DEVELOPING A COMPUTER PROGRAM TO OPTIMIZE CHANNEL DESIGN

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ABSTRACT

This project is aim to develop a computer program to optimize channel design. However, it is impossible to design a useful program if the basic knowledge on channel design is neglected. Thus, this project consists of two parts:

1. Study on open channel flow
2. Design a computer program by using Visual Basic 6.0

The flow of water in an open channel may be uniform flow or non-uniform flow. For uniform flow, the channel properties such as discharge, depth, breadth and mean velocity must be constant. On the other hand, non-uniform flow is opposite the uniform flow. The depth, breadth and mean velocity of flow may vary from section to section. Non-uniform flow in the channel is not covered in this project. The developed program may deal with uniform flow in rectangular channel, trapezoidal channel, triangular channel and circular channel only.

There are a lot of computer program nowadays. All of them have the similar programming function. However, the programming language and the way they display the output may be different. Although it is very easy to construct a program by using Visual basic 6.0, a proper use of the programming language is needed. User must be able to define the project clearly before an interface can be drawn.