Optimum Operating Policies for Multiple Reservoir Systems

by

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A Thesis for the Degree of

Master of Engineering Science

Department of Civil Engineering

University of Adelaide

Australia

April 1990

This Thesis embodies the results of supervised project work making up all of the work for the degree.

ACKNOWLEDGEMENTS

The author wishes to thank his supervisor, Dr. G. Dandy, Senior Lecturer in the Civil Engineering Department of the University of Adelaide, for his many hours of patient listening, valuable discussion and constructive criticism.

Funding for this work was provided by the Australian Water Resources Advisory Council and the Engineering and Water Supply Department of South Australia through the Partnership Research Program. In addition, a great deal of help was provided by members of the Water Resources Branch and the Operations Support Branch of the Engineering and Water Supply Department.

All these people, and any others who helped are thanked for the contribution they have made to this project.

I am extremely grateful to my family and friends who provided encouragement throughout the project.

Statement of Originality

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university and that, to my knowledge and belief, the thesis contains no material previously published or written by another person, except where due reference is made in the text. I consent to the thesis being made available for photocopying and loan if accepted for the award of the degree.

Philip Crawley

Date ..20/4/90..

Synopsis

Using the Adelaide system as a case study, this research work examines the the use of linear programming as an aid in the identification of optimum operating policies for water supply headworks systems. Such policies are aimed at achieving maximum yield for a given level of reliability. In systems where a large fraction of the supply is pumped a further objective is to minimise pumping cost.

The results obtained for the Adelaide system indicate that significant savings in pumping costs can be achieved by the use of linear programming. In systems with little pumping it is expected that an increased system yield can be achieved.

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