PERMISSION TO PHOTOCOPY JOURNAL PAPERS

Permission to photocopy for personal or internal reference beyond the limits in Sections 107 and 108 of the U.S. Copyright Law is granted by the American Society of Civil Engineers for libraries and other users registered with the Copyright Clearance Center, 21 Congress Street, Salem, Mass. 01970, provided the appropriate fee is paid to the CCC for all articles bearing the CCC code. Requests for special permission or bulk copying should be addressed to the Manager of Technical and Professional Publications, American Society of Civil Engineers.

CONTENTS

Foreword to Five Papers on Land Subsidence	13
Subsidence in United States due to Ground-Water Withdrawal by Joseph F. Poland	15
Legal Aspects of Subsidence due to Well Pumping by William Kopper and Donald Finlayson	37
Economic Consequences of Land Surface Subsidence by Lloyd C. Fowler	51
Subsidence in Harris and Galveston Counties, Texas by Ronald J. Neighbors	61
Induced Sinkholes: An Engineering Problem by John G. Newton	175
Subdomain Integration Model of Ground-Water Flow by T. V. Hromadka II and G. L. Guymon	187
Tensile Strength of PVC and ABS Well Casing Joints by Carl E. Kurt and W. Denney Pate	197
California Irrigation Return Flow Case Studies by Kenneth K. Tanji	209
This Journal is published quarterly by the American Society of Civil Engineer	ers

price to members is \$7.50. Nonmember subscriptions available; prices obtainable on request. Second-class postage paid at New York, N.Y. and at additional mailing offices. IR.

The Society is not responsible for any statement made or opinion expressed in its publications.

Publications office is at 345 East 47th Street, New York, N.Y. 10017. Address all ASCE correspondence to the Editorial and General Offices at 345 East 47th Street, New York, N.Y. 10017. Allow six weeks for change of address to become effective. Subscription

by John W. Keys, III	221
Water Quality Controls on Imperial Valley Drainage by Vernon E. Valantine	233
DISCUSSION	
Proc. Paper 16283	
Runoff Curve Number from Partial Area Watersheds, by Richard H. Hawkins (Dec., 1979. Prior Discussion: Dec., 1980). closure	241
Erosivity Values for Individual Design Storms, by Keith R. Cooley (June, 1980). by George R. Foster	243
DV (reorge K. rosier	473

Invication Deturn Flow Case Study

INFORMATION RETRIEVAL

The key words, abstract, and reference "cards" for each article in this Journal represent part of the ASCE participation in the EJC information retrieval plan. The retrieval data are placed herein so that each can be cut out, placed on a 3×5 card and given an accession number for the user's file. The accession number is then entered on key word cards so that the user can subsequently match key words to choose the articles he wishes. Details of this program were given in an August, 1962 article in CIVIL ENGINEERING, reprints of which are available on request to ASCE headquarters.

^aDiscussion period closed for this paper. Any other discussion received during this discussion period will be published in subsequent Journals.