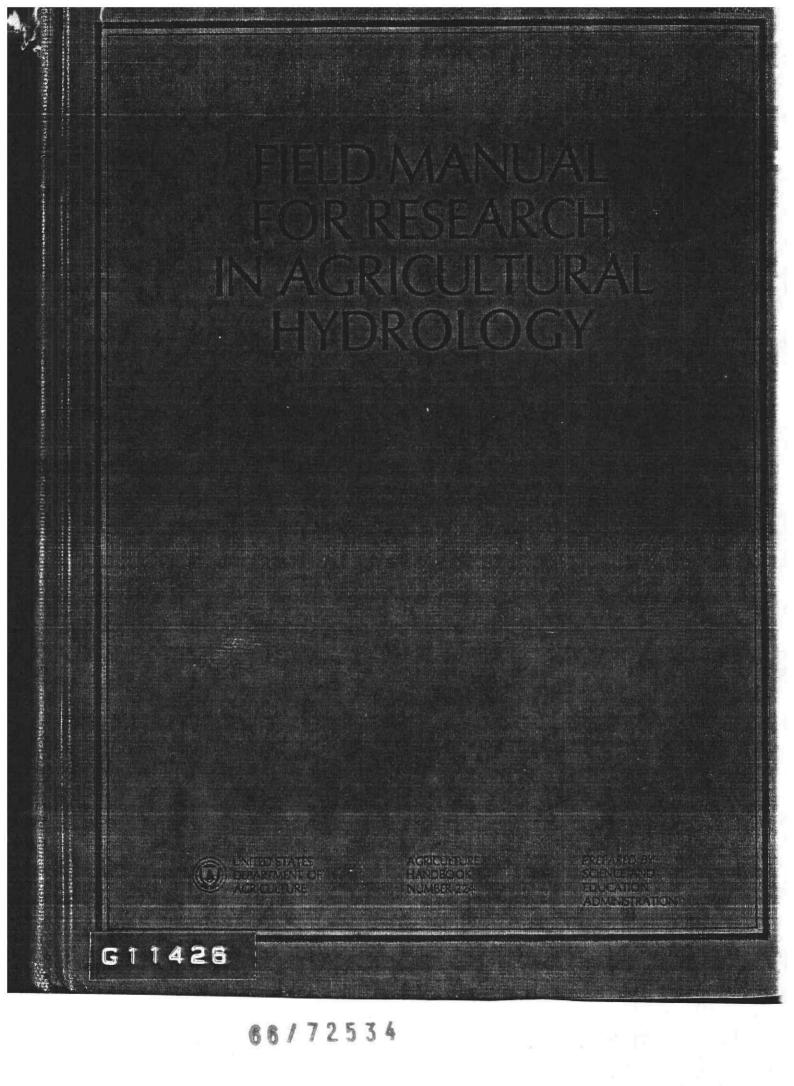
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## ABSTRACT

Brakensiek, D. L., H. B. Osborn, and W. J. Rawls, coordinators. 1979. Field Manual for Research in Agricultural Hydrology. U.S. Department of Agriculture, Agriculture Handbook 224, 550 pp., illus.

This publication was prepared to provide a complete set of techniques needed for the initiation and maintenance of hydrologic research projects. These techniques were obtained by soliciting information from experts and adapting material described in current literature. While this publication cannot replace individual instruction by an experienced person, it should serve as a reference for such instruction and, if followed, place the data in a form that will be suitable for potential analyses. Chapters 1, 2, and 3 deal with precipitation, runoff, and climate. Chapters 4, 5, and 6 discuss sedimentation, geology, and watershed characteristics and soil moisture. Each subject is divided into (1) installations, (2) field observations, (3) data reduction, and (4) data processing.

Key words: precipitation, runoff, climate, sedimentation, geology, soil conditions, watersheds, data reduction, data processing, field observations, field maintenance, site requirements, installations.

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The authors gratefully acknowledge the help of commercial companies for supplying detailed information on their equipment.

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## INTRODUCTION

This publication was prepared to provide a complete set of techniques needed for the initiation and maintenance of hydrologic research projects. These techniques were obtained by soliciting information from experts and adapting material described in current literature. While this publication cannot replace individual instruction by an experienced person, it should serve as a reference for such instruction and, if followed, place the data in a form that will be suitable for potential analyses. Forms used here are illustrations only of how best to organize and record the data.

Chapters 1, 2, and 3 deal with precipitation, runoff, and climate. Chapters 4, 5, and 6 deal with sedimentation, geology, and watershed characteristics and soil moisture. Each subject is divided into (1) installations, (2) field observations, (3) data reduction, and (4) data processing.

Most hydrologic analyses and computations dealing with precipitation are expressed in surface inches. For streamflow and storage, however, quantities and rates often are expressed in units of feet, acres, and miles for easy conversion to structural dimensions.

The hydrologist continually is converting back and forth from surface inches and surface inches per hour to such volumetric units as cubic feet, acre-feet, and cubic feet per secondhours or to such units of rate as cubic feet per second and cubic feet per second per unit area. Table 1 lists common conversions in English units, and table 2 lists common conversions from English units to the International System (SI) units.

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