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Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Water Engineering; Contents; Preface; History of this Book Series: Water and Wastewater Engineering; Goals of this Book: Water Engineering; Further Study in Addition to Classroom Education; Intended Audience; Course Suggestions; Key Features of This Book; Instructor Resources; Student Resources; Software; Acknowledgments; 1 Introduction to Water Systems; 1.1 Components of Water Systems; 1.2 Required Capacity; 1.3 Sources of Water Supply; 1.4 Rainwater; 1.5 Surface Water; 1.5.1 Continuous Draft; 1.5.2 Selective Draft; 1.5.3 Impoundage; 1.6 Groundwater; 1.6.1 Springs; 1.6.2 Wells 1.6.3 Infiltration Galleries1.6.4 Recharging Devices; 1.7 Purification Works; 1.8 Transmission Works; 1.9 Distribution Works; 1.9.1 High and Low Services; 1.9.2 Fire Supplies; 1.9.3 Pressures; 1.9.4 Capacity; 1.9.5 Service to Premises; 1.10 Water Systems Management; 1.10.1 Municipal Supplies; 1.10.2 Individual Small Supplies; 1.11 Individual Water Systems; Problems/Questions; References; 2 Water Sources: Surface Water; 2.1 Sources of Surface Water; 2.2 Safe Yield of Streams; 2.3 Storage as a Function of Draft and Runoff; 2.4 Design Storage; 2.5 Loss by Evaporation, Seepage, and Silting 2.5.1 Water-Surface Response2.5.2 Seepage; 2.5.3 Silting; 2.6 Area and Volume of Reservoirs; 2.7 Management of Catchment Areas; 2.7.1

Upland Areas; 2.7.2 Lowland Areas; 2.7.3 Quality Control; 2.7.4 Swamp Drainage; 2.8 Reservoir Siting; 2.9 Reservoir Management; 2.9.1 Quality Control; 2.9.2 Evaporation Control; 2.10 Dams and Dikes; 2.10.1 Embankment Dams; 2.10.2 Masonry Dams; 2.11 Spillways; 2.12 Intakes; 2.12.1 River Intakes; 2.12.2 Lake and Reservoir Intakes; 2.12.3 Submerged and Exposed Intakes; 2.12.4 Intake Velocities and Depths; 2.12.5 Intake Conduits and Pumping Stations
2.13 Diversion Works
2.14 Collection of Rainwater; Problems/Questions; References; 3 Water Sources: Groundwater; 3.1 Porosity and Effective Porosity; 3.2 Permeability; 3.3 Groundwater Geology; 3.4 Groundwater Situation in The United States; 3.5 Types of Aquifers; 3.6 Groundwater Movement; 3.7 Darcy's Law; 3.8 Aquifer Characteristics; 3.9 Well Hydraulics; 3.10 Nonsteady Radial Flow; 3.10.1 Confined Aquifers; 3.10.2 Semilogarithmic Approximation; 3.10.3 Recovery Method; 3.10.4 Unconfined Aquifers; 3.10.5 Leaky Aquifers; 3.11 Prediction of Drawdown; 3.11.1 Constant Discharge
3.11.2 Variable Discharge
3.11.3 Intermittent Discharge; 3.12 Multiple-Well Systems; 3.13 Aquifer Boundaries; 3.13.1 Recharge Boundaries; 3.13.2 Location of Aquifer Boundaries; 3.14 Characteristics of Wells; 3.14.1 Specific Capacity of a Well; 3.14.2 Partial Penetration; 3.14.3 Effective Well Radius; 3.14.4 Measurement of Well Characteristics; 3.15 Yield of a Well; 3.15.1 Maximum Available Drawdown; 3.15.2 Specific Capacity-Drawdown Curve; 3.15.3 Maximum Yield; 3.16 Well Design; 3.17 Well Construction; 3.17.1 Dug Wells; 3.17.2 Driven and Jetted Wells; 3.17.3 Bored Wells; 3.17.4 Drilled Wells
3.17.5 Collector Wells

Sommario/riassunto

"This book focus is on drinking water supply and treatment. Consequently, it devotes more depth to discussing water quality, quantity and pressure issues, problems related to emerging contaminants, water supply infrastructure, water treatment processes and water system selection"--
