

1. Record Nr.	UNINA9910465434503321
Titolo	Hydraulics of wells : design, construction, testing, and maintenance of water well systems // prepared by the Task Committee on Hydraulics of Wells of the Groundwater Hydrology Technical Committee of the Groundwater Council and Watershed Council of the Environmental and Water Resources Institute of the American Society of Civil Engineers ; edited by Nazeer Ahmed, Stewart W. Taylor, and Zhuping Sheng
Pubbl/distr/stampa	Reston, Virginia : , : American Society of Civil Engineers, , 2014 ©2014
ISBN	1-68015-402-8 0-7844-7826-0
Descrizione fisica	1 online resource (523 p.)
Collana	ASCE Manuals and Reports on Engineering Practice ; ; Number 127
Disciplina	628.1/14
Soggetti	Wells Hydrogeology Hydrology Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	""Cover""; ""CONTENTS""; ""CONTRIBUTORS""; ""PREFACE""; ""INTRODUCTION""; ""1. FUNDAMENTAL CONCEPTS OF GROUNDWATER FLOW""; ""1.1 General""; ""1.2 Hydrologic Cycle""; ""1.3 Porous Media""; ""1.4 Aquifer Systems""; ""1.5 Aquifer Storage""; ""1.6 Darcy Equation""; ""1.7 Basic Equations of Groundwater Flow""; ""1.8 Aquifer Flow""; ""1.9 Summary""; ""1.10 Solved Design Example 1""; ""1.11 Solved Design Example 2""; ""1.12 References""; ""2. HEAD LOSSES, TOTAL DRAWDOWN, TOTAL DYNAMIC HEAD, AND EFFICIENCY OF WATER-WELL SYSTEMS""; ""2.1 General""; ""2.2 Head Loss in the Suction Pipe"" ""2.3 Head Loss in the Delivery Pipe"" ""2.4 Total Dynamic Head""; ""2.5 Efficiency of Water-Well Systems""; ""2.6 Solved Design Example 1""; ""2.7 Solved Design Example 2""; ""2.8 Solved Design Example 3""; ""2.9 References""; ""3. DESIGN OF WATER WELLS""; ""3.1 General""; ""3.2 Design of Borehole, Casing, and Screen""; ""3.3 Design of Filter Pack"";

""3.4 Design of Well Screen""; ""3.5 Economic Considerations in Design""; ""3.6 Summary""; ""3.7 References""; ""4. CONSTRUCTION, DEVELOPMENT, AND TESTING OF WATER WELLS""; ""4.1 General""
""4.2 Site Assessment for Potential Municipal Water Well Sites""""4.3 Drilling, Installation, and Cementing of Conductor Casing""; ""4.4 Drilling the Borehole""; ""4.5 Geophysical Borehole Logging""; ""4.6 Isolated Aquifer Zone Testing""; ""4.7 Water Quality and Yield""; ""4.8 Well Destruction Methods""; ""4.9 Mechanical Grading Analyses""; ""4.10 Lithologic Descriptions of Formation Materials Using Uni. ed Soil Classi. cation System""; ""4.11 Preparation for Well Completion""; ""4.12 Installation of Casing, Screen, and Filter Pack""; ""4.13 Interaquifer Seals""
""4.14 Principles of Well Development""""4.15 Final Development with Deep Well Turbine Pump (Vertical Line Shaft)""; ""4.16 Pumping Tests""; ""4.17 Flowmeter (Spinner) Survey""; ""4.18 Collecting Water Quality Samples at the End of the Constant-Rate Test""; ""4.19 Miscellaneous Final Tasks""; ""4.20 Final Report including Analysis""; ""4.21 Acknowledgments""; ""4.22 References""; ""5. CORROSION OF WATER WELLS""; ""5.1 General""; ""5.2 Theory of Corrosion""; ""5.3 Types of Corrosion""; ""5.4 Corrosive Properties of Water""; ""5.5 Corrosion of Water-Well Systems""
""5.6 Prediction of Corrosion""""5.7 Evaluation of Corrosion Rate Data""; ""5.8 Protective Measures for Corrosion""; ""5.9 Troubleshooting for Well Corrosion""; ""5.10 Solved Design Example 1""; ""5.11 References""; ""6. INCRUSTATION OF WATER WELLS""; ""6.1 General""; ""6.2 Theory of Incrustation""; ""6.3 Analysis of Groundwater""; ""6.4 Forms of Incrustation""; ""6.5 Causes of Incrustation""; ""6.6 Effects of Velocity, Pressure, and Temperature Changes""; ""6.7 Chemical Incrustation""; ""6.8 Physical Incrustation""; ""6.9 Biological Incrustation""; ""6.10 Character of Iron Deposits""
""6.11 Field Testing of Incrustation""
