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**HYDROGEOLOGY OF  
AN ARID REGION:  
THE ARABIAN GULF  
AND ADJOINING AREAS**



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## PREFACE

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The Arabian Peninsula is an arid to semi-arid region, with a low rainfall and high temperatures most of the year, but with a high humidity in the coastal areas during the summer months. Water resources are limited, yet the availability of a sufficient supply of good quality water is the major requirement for the social, industrial, agricultural and economic development of the region. The increased demand for water arises from the improved standard of living, population growth and development arising from the oil revenues.

The countries of the Arabian Peninsula have made great efforts, to remedy the water shortage, by providing the financial and technical backing, for water desalination, treatment of wastewater and improved management and conservation techniques. The various water ministries, universities and research centres have supported scientific research, and applied the most recent technologies, in the search for new and alternative water supplies. Laws have been promulgated and economic and public relation campaigns have been developed, to promote and encourage the practice of efficient water use and the conservation of this scarce commodity.

In this book we have tried to provide the most important source of information for senior undergraduate and graduate students and researchers of the Gulf area, and more generally of arid regions, in order to comprehend the nature of the problems and how they interact with all aspects of life. In an area with a water deficiency, these interactions are more clearly defined than in water rich environments. For this reason sections on water laws and management, not usually found in regular hydrology was appropriately placed. The first part of the book is of a general character, it provides a geographic and geologic setting and emphasizing the climatic parameters, followed by a discussion on the aquifers and water chemistry. The second part of the book is devoted to the legal and management aspects of water resources, the more detailed studies of individual areas follows, and the book ends with the application of computer modeling of water flow and aquifers. Obviously the coverage cannot be complete, but a substantial bibliography provides a key to more detailed study.

# TABLE OF CONTENTS

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Preface .....	ii
Acknowledgements and Copyright Permissions .....	iii
Table of Contents .....	iv

## Chapter 1: An Introduction to Water Resources in the Arabian Peninsula

Introduction .....	1
Water Losses .....	2
Drinking Water Losses .....	2
Irrigation Water Losses .....	2
Rain and Flood Water Losses .....	2
Dams for Water Conservation and Protection .....	2
Dam Construction Measurements .....	3
Types of Dams .....	3
Water Resources .....	3
Water Resources in Saudi Arabia .....	3
Water Resources in Oman .....	4
Water Resources in United Arab Emirates .....	4
Water Resources in Qatar .....	5
Water Resources in Kuwait .....	5
Water Resources in Bahrain .....	5
Water Consumption .....	5
Scope of the Volume .....	5

## Chapter 2: Physical Geography of the Arabian Peninsula

Geomorphology .....	7
Geographic Setting .....	7
Topography .....	7
Geologic Setting .....	10
Geomorphological Zones .....	10
The coastal zones .....	10
The gravel and dune zone .....	13
The mountain belt zone .....	15
Vegetation and Water .....	16
Climate .....	18
Temperature .....	21
Precipitation .....	28
Wind Directions .....	31
Relative Humidity .....	41
Evaporation .....	42

## Chapter 3: Geology of the Arabian Peninsula and Gulf

Introduction .....	55
The Succession of Tectonic Events .....	58
Phase 1: The Consolidation of the Arabian Shield .....	58
Phase 2: The Phase of Tectonic Stability .....	58
Phase 3: Paleotethys, Neotethys and the Break-up of Gondwana .....	61
Arches/Paleohighs and Basins/Depressions .....	62
The Stratigraphic and Sedimentological Framework .....	63
Infracambrian: Stratigraphy and Sedimentation .....	64

Paleozoic: Stratigraphy and Sedimentation .....	65
Triassic: Stratigraphy and Sedimentation .....	66
Jurassic: Stratigraphy and Sedimentation .....	67
Early Jurassic .....	67
Middle Jurassic .....	68
Late Jurassic .....	69
Cretaceous: Stratigraphy and Sedimentation .....	70
Early Cretaceous .....	71
Middle Cretaceous .....	72
Late Cretaceous .....	73
Tertiary: Stratigraphy and Sedimentation .....	75
Paleogene .....	75
Neogene .....	76

#### Chapter 4: Aquifer and Aquiclude Systems

Introduction .....	79
Precambrian-Paleozoic Aquifers and Aquicludes .....	82
Huqf Aquifer .....	82
Saq Sandstone Aquifer .....	82
Wajid Sandstone Aquifer .....	82
Tabuk Aquifers and Aquicludes .....	82
Lower Tabuk Aquiclude and Aquifer .....	82
Middle Tabuk Aquifer .....	83
Upper Tabuk Aquifer .....	83
Jauf Aquifer and Aquiclude .....	84
Berwath Aquifer .....	84
Unayzah Aquifer .....	84
Haushi Aquifer .....	84
Khuff Aquifer .....	84
Ru'us Al Jibal Aquifer .....	84
Mesozoic Aquifers and Aquicludes .....	86
Sudair Shale Aquiclude .....	86
Jilh Aquifer .....	86
Minjur Aquifer .....	86
Marrat Aquiclude .....	87
Dhurma Aquifer .....	87
Upper Jurassic Aquitard and Aquifer .....	87
Sulayy-Yamama-Buwaib Aquifers .....	87
Biyadh-Wasia Aquifer .....	87
Aruma Aquifer .....	88
Cenozoic Aquifers and Aquicludes .....	89
Umm er Radhuma Aquifer .....	92
Rus Aquiclude .....	94
Dammam Aquifer .....	95

#### Chapter 5: Hydrogeochemistry

Introduction .....	101
Hydrogeochemistry of Rain Water .....	101
Hydrogeochemistry of Spring Water .....	102
Hydrogeochemistry of Falaj Water .....	106
Hydrogeochemistry of Groundwater .....	108
Paleozoic-Mesozoic Aquifer .....	109
Tertiary Aquifer .....	110
Quaternary Aquifer .....	118
Water Salinity Variation .....	119



## Chapter 6: Traditional Water Resources: Springs and Falajes

Introduction .....	125
Springs .....	125
Geologic Setting .....	125
Spring Discharge .....	127
Falajes .....	128
Falaj Administration .....	129
Water Ownership in Falaj Systems .....	131
Falaj Construction .....	131
Falaj Discharge .....	134

## Chapter 7: Non-Traditional Water Resources: Desalination and Treated Wastewater

Introduction .....	137
Desalination Processes .....	137
Economic Constraints .....	140
Environmental Impact .....	140
Security Problems .....	140
Treated Wastewater .....	142
Contributions of Treated Wastewater to Total Water Demands .....	142
Advantages of Wastewater Reuse .....	143
Constraints on Wastewater Reuse .....	145
Public Attitude .....	145
Technical Problems .....	145
Environmental Concerns .....	146
Potential of Treated Wastewater .....	146
Guidelines for Wastewater Reuse .....	146

## Chapter 8: Case Studies on the Hydrogeology of the Cenozoic Aquifer Systems in the Arabian Peninsula

Cenozoic Hydrogeological System .....	147
Cenozoic Aquifer System of Kuwait .....	149
Introduction.....	149
Hydrogeology and Groundwater Occurrence .....	151
Kuwait Group Aquifer .....	152
Dammam Aquifer .....	154
Radhuma Aquifer.....	155
Groundwater flow .....	156
Hydrogeochemistry .....	156
Water Quality in the Kuwait Group Aquifers .....	157
Water Quality in the Dammam Aquifer.....	160
Water Quality in the Radhuma Aquifer.....	162
Cenozoic Aquifer System in Saudi Arabia .....	164
Introduction .....	164
Hydrogeology and Groundwater Occurrence .....	165
Umm er Radhuma Aquifer.....	167
Hydrogeology .....	167
Water Quality .....	169
Hydrogeologic Properties .....	169
Dammam Aquifer .....	169
Hydraulic Properties .....	172
Hydrogeologic Properties .....	173
Water Quality .....	174
Isotope Hydrology .....	175
Neogene and Quaternary Aquifers .....	176
Water Quality .....	177

Paleogene Aquifer System in Bahrain .....	178
Introduction .....	178
Hydrogeology .....	179
Aquifer Systems .....	180
Dammam Aquifer Systems .....	180
Umm er Radhuma Aquifer Systems .....	183
Hydrogeochemistry .....	183
Dammam Aquifer Salinity .....	183
Umm er Radhuma Aquifer Salinity .....	183
Interpretation of Groundwater Chemistry .....	185
Spatial and Temporal Changes in Groundwater Salinity .....	186
Spatial Trend Analysis .....	186
Temporal Trend Analysis .....	88
Water Quality .....	191
Tertiary Aquifer System in Qatar.....	193
Introduction .....	193
Northern Hydrologic Zone .....	195
Southern Hydrologic Zone .....	195
Southwestern Hydrologic Zone .....	195
The Relationship of Geology and Groundwater .....	195
Aquifer Parameters .....	196
Groundwater Flow .....	196
Groundwater Quality .....	197
Recharge and Discharge .....	199
Quaternary Aquifer System in United Arab Emirates .....	205
Introduction .....	205
Flow Systems .....	206
Quaternary Aquifers .....	207
Gravel Aquifer .....	207
Sand Dune Aquifer .....	208
Physical Properties and Water Chemistry .....	208
Water Temperature .....	208
Electrical Conductivity .....	209
Hydrogen-Ion Concentration .....	210
Major Cations .....	210
Major Anions .....	211
Water-Dissolved Salts .....	212
Groundwater Types .....	213
Water Quality .....	213
Hydrochemical Coefficients .....	213
Isotope Techniques .....	214
Isotope Composition of the Atmosphere .....	214
Isotope Characteristics of Groundwater .....	215
Gravel Aquifer .....	215
Sand Dune Aquifer .....	216
Cenozoic Aquifer System of Oman .....	231
Introduction .....	231
Hydrostratigraphy .....	231
Groundwater Flow .....	234
Hydrochemical Facies .....	236
Isotope Hydrology .....	237
Aquifers .....	239
Quaternary Aquifer of Northern Oman Mountains .....	239
Quaternary Coastal Aquifer .....	240
Quaternary Interior Aquifer.....	241
Paleogene Aquifer .....	242

## Chapter 9: The Legal Basis for Groundwater Protection in the Gulf States

Part One: An Introduction to Islamic Law Applied to Water .....	245
Introduction .....	245
Principles of Islamic Law Applied to Water .....	246
Water as a Public Right .....	246
Shirb and Shurb Water Rights .....	246
Spring or Well Water Rights .....	246
Private Stream Rights .....	247
Stream (or Channel) Rights (Hag al Magra) .....	247
Drainage Rights (Hag al Maseel) .....	247
Part Two: Summary of the Legal Situation in the Gulf States .....	248
Water Conservation in the Gulf States .....	248
System for Conservation of Water Resources .....	248
Executive Rules of Water Resources Conservation System .....	249
The United Arab Emirates .....	251
Water and Waste Regulations .....	252
Review of Current Dubai Legislation .....	252
Dubai Ordinances .....	252
Implementation of Regulations .....	253
Regulations on the Reuse and Land Disposal of Wastewater and Sludge .....	253
Regulations Concerning the Disposal of Wastewater into Marine Waters .....	254
The Technical Basis for Groundwater Protection Regulations .....	255
Point Source Pollutants .....	256
Non-point Source Pollutants .....	256
Deterioration of Groundwater Quality Due to Over-pumping .....	256
Groundwater Protection .....	257
Regulations for Point Source Pollutants and Landfill Sites .....	257
Underground Storage Tank Program .....	258
Underground Injection Control Program .....	259
Regulations for Non-point Source Pollutants .....	260
Discussions and Conclusions .....	262
Potable Water Supply .....	262
Waste Disposal .....	263
The Consequence of Legislation .....	263
Policy Co-ordination .....	264
Saudi Arabia .....	264
Ministry of Planning .....	264
Ministry of Agriculture and Water .....	264
Ministry of Municipal and Water Affairs .....	265
General Establishment of Water Desalination .....	265
Kuwait .....	265
Ministry of Electricity and Water .....	265
General Authority of Agriculture and Fisheries .....	265
The Ministry of Public Works .....	265
Kuwait Institute of Scientific Research .....	266
Bahrain .....	266
Water Policy .....	266
Non-traditional Resources .....	267
Water Conservation .....	267
Qatar .....	268
Oman .....	268
Water Regulations .....	268
Water Conservation .....	269
Recharge and Retention Dams .....	269



Treated Water and Brackish Water .....	269
Domestic and Commercial Supplies .....	269
Agricultural Water Economy .....	270
Conservation Campaign .....	270

#### **Chapter 10: Towards the Development of a Water Policy Management**

Introduction .....	273
Water Resources .....	273
Water Policy .....	276
Water Demands and Supplies .....	277
Water Resource Assessment .....	279
Principal Water Sources .....	280
Groundwater .....	280
Desalination .....	280
Wastewater .....	281
Conservation on Water Supply.....	281
Water Legislation .....	282
Projected Energy Conservation (Towards a Partial Solution) .....	284
Future Conservation Policy and Rational Plans .....	285

#### **Chapter 11: Numerical Modeling of Certain Aquifer Systems in United Arab Emirates, Saudi Arabia and Kuwait**

Introduction .....	287
Groundwater-Flow Model of the Wadi al Bih Aquifer, Northern United Arab Emirates .....	287
A Geochemical Model of the Wadi al Bih Aquifer, Northern United Arab Emirates .....	292
Geochemical Interpretation .....	294
Groundwater-Flow Model of the Dammam Aquifer in Saudi Arabia .....	299
Groundwater-Flow Model for the Kuwait Aquifer Systems .....	300
Controlled Development .....	302
Intensive Production.....	302
Long-term Recovery .....	307
Artificial Recharge .....	307
Groundwater-Flow Models of the Quaternary Aquifer System, United Arab Emirates .....	308
Al Jaww Plain Model.....	308
Northeast Abu Dhabi Model .....	309

<b>References</b> .....	311
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<b>Subject Index</b> .....	325
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#### **Appendices**

Appendix-A : Glossary of Terms and Local Names Used in Water Resources Studies in Arabian Gulf Region .....	A1-A6
Appendix-B: Glossary of Scientific & Technical Terms Related to Water Resources .....	B1-B16