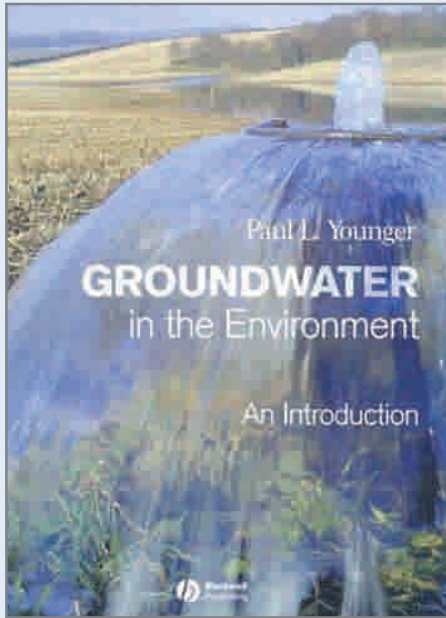


# BOOK REVIEW

## Groundwater in the Environment: An Introduction

*By Paul L. Younger (c) 2007*

Blackwell Publishing



Al Gore, who stood for the position of the President of the United States lost the race for the White House but instead won both an Academy Award and the Nobel Prize for his contributions to our understanding and appreciation for the threat of Global Warming and its consequences on the environment. It would seem that the Inconvenient Truth was about Global Warming but to me (the reviewer) its most dire warning was not about the weather but about the supply of drinkable water. It is no surprise then that there is a resurgence of interest in groundwater and securing clean water supplies.

While many books on this subject are fairly difficult to read and contain too many mathematical equations and models, Paul Younger's "Groundwater in the Environment" is the exception. It proclaims in the preface that it is "Groundwater for beginners". It delivers the subject matter in an easy-to-read and well-phrased succinct manner. Unlike many other textbooks on the topic of groundwater, this one is less intimidating in that it makes terms and concepts for a non-hydro-geologist easy to comprehend.

Chapter 1 is Occurrence of Groundwater. Here the reader gets acquainted with terms like the water cycle, aquifers, aquitards and the like. This was accompanied by simple and instructive schematic diagrams.

Chapter 2 is Sources of Groundwater. Questions like "Where does groundwater come from? What is meant by recharge?" are posed and answered.

Groundwater Movement in Chapter 3 is a little dry but the author tries his best to keep things simple and interesting. Some of the concepts are explained in text boxes which offer a witty and whimsical insight into this very dry topic such as that with the heading in Box 3.2: "Life's a beach and then you dye: observing groundwater discharge geomorphology and flow processes at the seaside."

The topic of Groundwater Quality is dealt with in Chapter 4 and it introduces readers to two classic trilinear hydrochemical plotting diagrams -- the Piper diagram and the Expanded Durov diagram.

Chapter 5 is about Discharge and Catchment Hydrology. This looks at the role of groundwater in generating surface runoff and physical controls on groundwater discharge at the catchment scale.

Groundwater and Freshwater Ecosystems, and Groundwater as a Resource are the titles for Chapters 6 and 7. These are the two areas that are going to be the focus in the years to come.

Groundwater Geohazards in Chapter 8 has Box 8.2 captioned "That sinking feeling: subsidence due to groundwater withdrawal in two mega-cities".

Groundwater under Threat has Box 9.1 captioned "Overexploited aquifers: good or bad? – You decide..." which warns of the use of and depletion of non-renewable groundwater using fossil water to feed the Libyan Great Man Made River Project.

Chapter 10 covers Simulations and Groundwater but without the painful maths normally encountered with this topic.

Most importantly, it closes with Chapter 11 --Does this mean we are heading towards a state of bankruptcy in our renewable water supply? that offers us some hope towards sustainable development with sub-topics listed as "Remediating contaminated groundwaters" using in-situ and ex-situ technologies, including the use of bioremediation technologies.

*By Gregory Poi*