

Protecting Groundwater for Health

MANAGING THE QUALITY OF DRINKING-WATER SOURCES

Protecting drinking-water resources is the first barrier against pathogens and substances hazardous to health. Practitioners in drinking-water supply or surveillance – from the local and technical level up to senior management – have a key role in initiating collaboration with other sectors, such as environment, land-use planning, or agriculture towards safeguarding drinking-water sources.

Protecting Groundwater for Health provides a structured approach to analysing hazards to groundwater quality, assessing the risk they may cause for a specific supply, setting priorities in addressing these, and developing management strategies for their control. For health professionals, it thus is a tool for access to environmental information needed for such a process, and for professionals from other sectors, it gives a point of entry for understanding health aspects of groundwater management.

This book presents tools for developing strategies to protect groundwater for health by managing the quality of drinking-water sources.

Section I covers the natural science background needed to understand which pathogens and chemicals are relevant to human health, how they are transported in the sub-surface and how they may be reduced, removed or retarded.

Section II provides guidance for compiling information needed to characterise the drinking-water catchment area in order to assess health hazards potentially reaching groundwater.

Section III provides conceptual guidance on prioritising both hazards and management responses.

Section IV provides an overview of the potential management actions that may be taken to protect drinking-water sources. These begin with their integration into a comprehensive Water Safety Plan that covers all supply steps from catchment to consumer.

Section V provides an overview of measures to prevent pollution from human activities in the catchment, beginning with the overarching issues of policy, land-use planning and implementation for protecting groundwater. Overviews are presented of the specific management approaches that help avoid groundwater pollution from the range of human activities in the catchment, i.e. agriculture, sanitation practices, industry, mining, military sites, waste disposal and traffic.

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Managing the quality of Drinking-water sources



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