



Contaminated Rivers
A Geomorphological-Geochemical Approach to Site
Assessment and Remediation
Miller, Jerry R., Orbock Miller, Suzanne M.
2007, XIV, 418 p. 135 illus., Hardcover
ISBN: 978-1-4020-5286-6

[Table of contents](#)

About this textbook

The geomorphological, surficial and geochemical processes and conditions of rivers require a tailored set of strategies and programs to successfully clean up contaminated river reaches. The primary purpose of this book is not only to provide students and professionals with an introductory understanding of fluvial geomorphic principles but also to explain using a process oriented approach how these geomorphic principles can be integrated with geochemical data to cost-effectively characterize, assess and remediate contaminated river systems. Numerous case studies from North America and many other parts of the world are included.

Audience:

Upper level undergraduate and graduate students in geoscience, engineering, environmental science, geography, geochemistry, toxicology, and soil science studying the means to assess, remediate or restore contaminated streams and rivers. It also serves as a reference book for professionals who are working on contaminated aquatic systems, particularly rivers contaminated by trace metals.

"River contamination is a problem of global significance. This book provides a comprehensive and highly readable review of the role of fluvial geomorphic processes in understanding and predicting the dispersal and fate of contaminants in aquatic environments. Aimed at both students and professionals it forms an excellent introductory text to this rapidly developing field, especially in river basins experiencing rapid environmental change."

Mark G. Macklin, University of Aberystwyth, UK

"This excellent book clearly and graphically explains the geochemical and geomorphological principles influencing the contamination of river systems, and cost-effective methods for contaminated river assessment and remediation. I shall certainly be recommending it to all of my students and colleagues."

Karen Hudson-Edwards, Birkbeck, University of London, UK

Written for:

College seniors and graduate students in geoscience, engineering, environmental science, geography and soil science; those working on metal contaminated aquatic systems, including geologists, hydrologists, ecologists, geochemists, and civil/environmental engineers

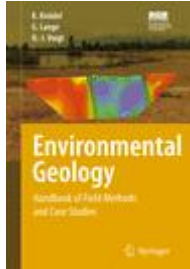
Keywords:

fluvial geomorphology
heavy metal pollution
remediation
river restoration
site assessment



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Environmental Geology

Handbook of Field Methods and Case Studies
With contributions by numerous experts

Knödel, Klaus, **Lange**, Gerhard, **Voigt**, Hans-Jürgen

2007, XXVI, 1358 p. 501 illus., 243 in color.,
Hardcover

ISBN: 978-3-540-74669-0

About this book

[Table of contents](#)

About this book

This handbook describes a broad spectrum of methods in the fields of remote sensing, geophysics, geology, hydrogeology, geochemistry, and microbiology designed to investigate landfill, mining and industrial sites. The descriptions provide information about the principle of the methods, applications and fundamentals. There is also coverage of the instruments, survey practice, processing and interpretation of the data, quality assurance, personnel, equipment, time needed, and examples, as well as references and sources for further reading.

Furthermore, this handbook deals with the stepwise procedure for investigating sites and common problems faced in efficient implementation of field operations. It can be used as a practical guide for training students, as well as to illustrate the advantages of interdisciplinary site investigations to decision-makers faced with their own environmental investigations.

Written for:

Libraries; scientists, researchers, consultants, professionals, graduates

Keywords:

environmental geology
geochemistry
geophysics
remote sensing
site investigation



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MEXICO A.C.



Methods and Techniques for Cleaning-up Contaminated Sites

Proceedings of the NATO Advanced Research Workshop on Methods and Techniques for Cleaning-up Contaminated Sites, Sinaia, Romania, 9-11 October 2006

Series: **NATO Science for Peace and Security Series**

Subseries: **NATO Science for Peace and Security Series C: Environmental Security**

Annable, M.D.; Teodorescu, M.; Hlavinek, P.; Diels, L. (Eds.)

2008, VIII, 196 p., Softcover

ISBN: 978-1-4020-6874-4



About this book

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[Table of contents](#)

About this book

Soil and groundwater pollution caused by contaminants including petroleum hydrocarbons, represents a serious threat to the environment in NATO and NATO Partner countries. Solutions are needed that represent practical alternatives to costly remedial strategies yet still yield benefits to site managers.

This publication comprises the presentations made at the NATO Advanced Research Workshop held in Sinaia, Romania 9 – 11 October, 2006. The contributions represent a wide range of issues and challenges related to contaminated site management from low cost solutions to petroleum contaminated sites to advances in biological treatment methods.

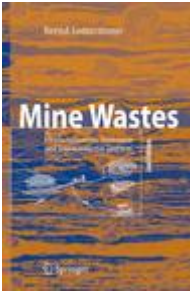
The publication is meant to foster links between groups facing challenges cleaning up contaminated sites through presentations that explore the problems currently being addressed and solutions that are emerging in the field.

Written for:

Scientists and engineers engaged in managing contaminated sites with significant challenges in terms of the extent and nature of the contamination present

Keywords:

Environmental
NATO
Science
Security
Sub-Series C



Mine Wastes
Characterization, Treatment and Environmental Impacts
Lottermoser, Bernd G.
2nd ed., 2007, XIV, 304 p. 70 illus., Hardcover
ISBN: 978-3-540-48629-9

About this book

[Table of contents](#)

About this book

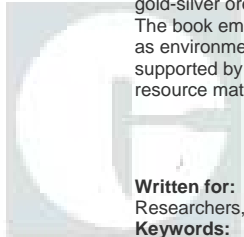
This book provides a thorough, up-to-date overview of wastes accumulating at mine sites. It deals comprehensively with sulfidic mine wastes, mine water, tailings, cyanidation wastes of gold-silver ores, radioactive wastes of uranium ores, and wastes of phosphate and potash ores. The book emphasizes the characterization, prediction, monitoring, disposal and treatment as well as environmental impacts of problematic mine wastes. The strong pedagogical framework is supported by case studies from around the world, end-of-chapter summaries as well as lists of resource materials and www sites for each waste type.

Written for:

Researchers, scientists, libraries, institutes, graduates, undergraduates, professionals

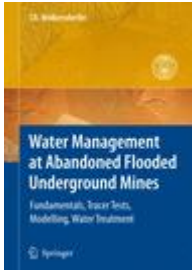
Keywords:

Applied earth science
environmental management
mine site pollution
mineral resources
waste management



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MÉXICO A.C.



Water Management at Abandoned Flooded Underground Mines

Fundamentals, Tracer Tests, Modelling, Water Treatment

Wolkersdorfer, Christian

2008, XX, 466 p. 125 illus., 124 in color., Hardcover

ISBN: 978-3-540-77330-6

About this book

[Table of contents](#)

About this book

Switching off the pumps of a mine is one of the last steps in the lifetime of a surface or underground mine. As the water in the open space raises, the water might become contaminated with different pollutants and eventually starts to flow in the open voids. This book addresses the processes related to mine abandonment from a hydrogeological perspective. After an introduction to the relevant hydrogeochemical processes the book gives detailed information about mine closure procedures. Based on in-situ measurements the hydrodynamic processes in a flooded mine are described and some of the mine closure flow models exemplified. As all investigations base on precise data, the book gives some key issues of monitoring and sampling, especially flow monitoring. Then the book shows some new methodologies for conducting tracer tests in flooded mines and gives some hints to passive mine water treatment. At the end 13 well investigated case studies of flooded underground mine and mine water tracer tests are described and interpreted from a hydrodynamic point of view.

Written for:

Libraries, institutes, researchers, scientists

Keywords:

hydrodynamics
hydrogeology
hydrology
mining
mining engineering

tracer tests

Basic Environmental and Engineering Geology

Author(s) - F.G. Bell

List Price: \$119.95

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Trim Size: 6 x 9



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About the Title

Basic Environmental and Engineering Geology exemplifies the vital role of environmental geology and geological processes in understanding the physical environment and the influence and fundamental importance of engineering geology in our modern world, particularly the infrastructure. The author examines the influence of geohazards, the significance of soil and water resources, and the impact of mining, waste disposal, and pollution/contamination on the environment, as well as the various aspects of construction that are involved in the development of the infrastructure. The book provides a wealth of practical examples and a comprehensive suggested reading list accompanies each chapter.



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