

54-1740 TN145 2015-14692 CIP
Kessler, Stephen E. **Mineral resources, economics and the environment**, by Stephen E. Kessler and Adam C. Simon. 2nd ed. Cambridge, 2016. 434p bibl index ISBN 9781107074910 cloth, \$89.99

Mineral resource use has burgeoned in the decades since this classic text first appeared. The authors retain most topics and illustrations in the second edition but thoroughly update reserve numbers, case studies, etc. The new edition is longer but organized in the same manner. Half of the 14 chapters are devoted to general subjects (e.g., exploration and mining law); others are specific to categories of commodities (e.g., precious metals/gems and agricultural/chemical minerals). The only major change within the text occurs with the splitting of the non-ferrous metals chapter into "Light and Base Metals" and "Technology Elements." The longest chapter concerns (nonrenewable) energy resources, so the authors define the term *mineral* broadly. New angles include the impacts of recent economic volatility and China's rapid expansion. The authors mention environmental aspects of various mining activities but argue that trade-offs are inevitable at this high level of consumption. It is often challenging to decide how much background information to provide in books covering general topics; in this instance, some treatments (e.g., aqueous geochemistry and groundwater movement) may be too abbreviated. Readers may need prior knowledge in such areas but will be rewarded with a succinct overview of the entire mineral resource landscape. **Summing Up:** ★★ Recommended. Upper-division undergraduates through researchers and faculty; professionals.—*B. M. Simonson, Oberlin College*

CC 54-1741 TN72 MARC
Mineral deposits of North Africa, ed. by Mohammed Bouabdellah and John F. Slack. Springer, 2016. 594p afp ISBN 9783319317311 cloth, \$299.00; ISBN 9783319317335 ebook, \$229.00

This unique book is a compilation of modern scientific articles on a full spectrum of metallic and non-metallic deposits in North Africa. Most of the described deposits are economic, and many others are potentially profitable. As such, these descriptions will help guide further exploration and discovery. The long introductory chapter is an extensive geologic and metallogenetic synthesis of North Africa, providing context and perspective on the regional setting of the many important deposits and their spatial and temporal occurrences. Major ore groups include porphyry, skarn, and epithermal deposits; hydrothermal vein-type deposits; orogenic and granitoid-hosted gold and rare metal deposits; volcanic-hosted massive sulfide deposits; Mississippi Valley-type and sedimentary exhalative (SEDEX) deposits; and sediment-hosted iron, manganese, and phosphate deposits. The writing is strongly augmented by many geologic maps, cross sections, and field and petrographic photographs. It is also supplemented by abundant chemical and isotopic data. Extensive references support each chapter. This exemplary volume deserves a place in the libraries of economic geologists the world over. **Summing Up:** ★★ Recommended. Lower-division undergraduates through researchers and faculty; professionals.—*T. L. T. Grose, Colorado School of Mines*

CC 54-1742 P55 CIP
Pilkey, Orrin H. **Retreat from a rising sea: hard decisions in an age of climate change**, by Orrin H. Pilkey, Linda Pilkey-Jarvis, and Keith C. Pilkey. Columbia, 2016. 214p bibl index afp ISBN 9780231168441 cloth, \$29.95; ISBN 9780231541800 ebook, \$28.99

The authors examine the fragile state of global coastal developments arising from the concurrent pressures of sea-level rise and increasing coastal population and infrastructure. Inspired by his own experiences during Hurricanes Camille (1969) and Katrina (2005), O. Pilkey (emer.,

earth and ocean sciences, Duke Univ.) effectively makes the case that humans have continually failed to manage coastal regions in ways that honor past experiences with loss. Given the certainty of sea-level rise this century, there is an urgent need to devise and implement strategies for coastal retreat where it is possible and fortify critical infrastructure where it is not possible. The book covers the basic physical science of sea-level rise, provides examples of impacts in the most vulnerable US cities (New Orleans and Miami), compares US coastal policies and climate change preparation with that of the Netherlands and the vulnerable Amsterdam, and discusses current obstacles to action, including climate change denialism and financial benefits of continued coastal development. This book also builds on O. Pilkey's previous *The Rising Sea* (CH, Jan'10, 47-2582), which summarizes the science and debunks myths regarding the dangers of current coastal habitation. **Summing Up:** ★★ Recommended. Lower- and upper-division undergraduates; professionals; general readers.—*J. Schoof, Southern Illinois University*

54-1743 HT391 2016-932496 MARC
Portman, Michelle Eva. **Environmental planning for oceans and coasts: methods, tools, and technologies**. Springer, 2016. 237p bibl index afp (Geotechnologies and the environment, 15) ISBN 9783319269696 cloth, \$179.00; ISBN 9783319269719 ebook, \$139.00

Portman (architecture, Technion—Israel Institute of Technology) examines how planning can advance environmental conditions in ocean and coastal areas. In a well-ordered format, Portman discusses the significant concepts of planning for oceans and coasts, planners' techniques and processes, and the tools and technologies that are utilized to gain results. The introductory chapters establish important ocean and coastal planning theories, examine legal considerations and authorities, and provide descriptions of marine and coastal environments. The following chapters describe integrated planning approaches, suggestions to help thwart pollution, spatial planning ideas, communications tool planners use, and planning needs based on climate change. The text includes a generous number of high-quality photographs, figures, and tables. Each chapter contains references, and the work provides a much needed list of abbreviations. The value of the book is its comprehensive treatment of planning needs for ocean and coastal areas. **Summing Up:** ★★ Highly recommended. Upper-division undergraduates through researchers and faculty; professionals.—*J. B. Huffman, University of Wisconsin-Stevens Point*

Engineering

CC 54-1744 TJ163 CIP
Capehart, Barney L. **Guide to energy management**, by Barney L. Capehart, Wayne C. Turner, and William J. Kennedy. 8th ed. CRC Press, 2016. 749p index ISBN 9781498759335 cloth, \$149.95

Energy use and cost continue to rise, particularly due to the fast industrialization of developing countries. This trend demands new approaches in managing energy and its environmental impacts. This work, in its eighth edition, is an excellent resource addressing this issue. In 21 chapters (4 more than the seventh edition), it covers essential topics related to energy management. Following an introduction to energy management and an overview of the energy audit process, some of the covered topics include understanding energy bills, economic analysis and life cycle costing, electrical distribution systems, control systems and computers, renewable energy sources and water management, web-based building automation controls and energy information systems, creating green buildings, green house gas emission management, and human

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