



Recommended Reading Coastal Engineering

Natural coastal hazards along the Great Lakes affect municipalities, homeowners and businesses. As the demands of coastal development and investment continue to increase, so do the possibilities for increased loss of valuable property, habitat and life. Sound coastal engineering information on coastal erosion, waves, rip currents, changing water levels, flooding potentials, bluff instability and shoreline best-management practices are all needed. The library is working on creating a collection of materials in support of this important work.

For additional books in our collection, try searching in the UW Libraries' library catalog. If you need any other help, please email the library at askwater@aquawisc.edu

WWL call no. 020575

Future flooding and coastal erosion risks by Colin Thorne, Edward Evans, and Edmund C. Penning-Rowell. London: Thomas Telford: 2007.

This book presents a comprehensive insight into the flooding system, forecasting the manner in which flooding and coastal erosion risks may increase during the 21st century due to climate change and socio-economic development. It also examines ways to manage these increases. Purchased with funds from a generous grant from Friends of the UW Madison Libraries.

WWL call no. 040502

Rip currents: beach safety, physical oceanography, and wave modeling by Stephen Leatherman and John Fletemeyer. Boca Raton, FL: Taylor & Francis: 2011.

Experts identify advancements in research that will lead to a better understanding of the dynamics, mechanisms, and predictability of dangerous rip currents, and lower the number of rip current drownings.

WWL call no. 152197

An Introduction to Coastal Zone Management by Timothy Beatley, David J. Brower, and Anna K. Schwab. Washington, D.C.: Island Press: 2002.

An Introduction to Coastal Zone Management addresses the serious coastal trends and pressures in the U.S., assesses the current policy and planning framework, and puts forth a compelling vision for future management and sustainable coastal planning. A comprehensive overview of coastal planning and management issues for students and professionals in the field.

WWL call no. 152291

Marine and Coastal Protected Areas: A Guide for Planners and Managers by Rodney V. Salm, John R. Clark, and Erkki Siirila. Washington, D.C.: Island Press: 2000.

This is a new edition of the classic textbook on marine protected area (MPA) management in the tropics, originally produced as an output of the Bali World Parks Congress in 1982. Major advances covered in the new edition include innovative financing mechanisms, partnerships with the private sector and NGOs, and collaborative management between government and coastal communities.

WWL call no. 152307

Coastal Planning and Management by Robert Kay and Jacqueline Alder. New York: Taylor & Francis: 2005.

This book is the first comprehensive toolkit for coastal planners and those aiming to achieve effective coastal management worldwide. The important link between coastal planning and management is presented, with emphasis on tools for the development, evaluation and implementation of all key types of coastal management plans. For both coastal professionals and students of coastal management.

WWL call no. 152308

Ecological Riverfront Design: Restoring Rivers, Connecting Communities by Betsy Otto, Kathleen McCormick, and Michael Leccese. Chicago: American Planning Association: 2004.

Ecological Riverfront Design puts forth a new vision for the nation's urban riverfronts. It provides a set of planning and design principles that will allow communities to reclaim urban river edges in the most ecologically sound and economically viable manner possible. The report will guide planners, mayors, public works and environmental officials, river advocates, and the general public in their search for effective, ecological riverfront design.

WWL call no. 152319

Protecting coastal investments: examples of regulations for Wisconsin's coastal communities by Brian W. Ohm. [Madison]: Sea Grant, University of Wisconsin; UW Extension: 2008.

Full text

This is a resource guide of "best practices" for Wisconsin's Great Lakes coastal communities dealing with coastal erosion. It describes the causes of coastal erosion and suggests ordinance language that can be used by communities to address locally identified needs. The appendix is an inventory of current coastal setback provisions found in local ordinances in Wisconsin.

WWL call no. 181637

Catastrophe in the making: the engineering of Katrina and the disasters of tomorrow by William R. Freudenburg. Washington, DC: Island Press/Shearwater Books: 2009.

Based on the false promise of widespread prosperity, communities across the U.S. have embraced all brands of "economic development" at all costs. In Louisiana, that meant development interests turning wetlands into shipping lanes. By replacing a natural buffer against storm surges with a 75-mile long, obsolete canal that cost hundreds of millions of dollars, they guided the hurricane into the heart of New Orleans and adjacent communities. The authors reveal why, despite their geographic differences, California and Missouri are building—quite literally—toward similar destruction.

WWL call no. 181643

Smart growth for coastal and waterfront communities [Washington, DC]: National Oceanic and Atmospheric Administration: 2009.

purl.access.gpo.gov/GPO/LPS119878

This interagency guide builds on existing smart growth principles to offer 10 specific development guidelines for coastal and waterfront communities.

WWL call no. 232393

Planning for coastal resilience: best practices for calamitous times by Timothy Beatley. Washington, DC: Island Press: 2009.

After defining and explaining coastal resilience, Beatley focuses on what it means in practice. Resilience goes beyond reactive steps to prevent or handle a disaster. It takes a holistic approach to what makes a community resilient, including such factors as social capital and sense of place. Beatley provides case studies of five U.S. coastal communities, and "resilience profiles" of six North American communities, to suggest best practices and to propose guidelines for increasing resilience in threatened communities.

WWL call no. 232398

Regional and urban GIS: a decision support approach by Timothy L. Nyerges and Piotr Jankowski. New York: Guilford Press: 2010.

This unique text shows students and professionals how geographic information systems (GIS) can guide decision making about complex community and environmental problems.

WWL call no. 240559

Waterfronts: Cities Reclaim Their Edge by Ann Breen and Dick Rigby. Washington, D.C.: The Waterfront Press: 1997.

The authors have written the definitive work on urban waterfront development taking place over the last 30 years in cities and towns primarily in North America. The book traces the history and factors involved in waterfront development and looks at the broader context in which the work is occurring.

WWL call no. 240572

Port designer's handbook, 2nd edition by Carl Thoresen. London: Thomas Telford: 2010.

This book gives guidance and recommendations for the layout, design, and construction of modern port structures, including modern developments in navigation safety, port planning and site selection, cargo handling, and fender and mooring principles. Purchased with funds from a generous grant from Friends of the UW Madison Libraries.

WWL call no. 240573

Piers, jetties and related structures exposed to waves: guidelines for hydraulic loadings by Kirsty McConnell, William Allsop, and Ian Cruickshank. London: Thomas Telford: 2004.

Marine structures require careful assessment of their hydraulic loads, especially as larger ship sizes require longer jetties in deeper water. Construction can become substantially more expensive in these instances.

WWL call no. 250045

Manual on the use of timber in coastal and river engineering by Crossman Matt and Jonathan Simm. London: Thomas Telford: 2004.

This manual is designed to provide guidance on the principal issues surrounding the use of timber in coastal river engineering. Purchased with funds from a generous grant from Friends of the UW Madison Libraries.