1. Record Nr. UNINA9910145552403321

Autore	Brierley Gary J
Titolo	Geomorphology and river management : applications of the river styles framework / / Gary J. Brierley and Kirstie A. Fryirs
Pubbl/distr/stampa	Malden, MA, : Blackwell Pub., 2005
ISBN	1-281-32231-8 9786611322311 0-470-75136-3 0-470-75135-5
Descrizione fisica	1 online resource (412 p.)
Altri autori (Persone)	FryirsKirstie A
Disciplina	551.48/3
Soggetti	Rivers Stream ecology Watershed management Geomorphology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references (p. [364]-386) and index.
Nota di contenuto	Geomorphology and River Management: Applications of the River Styles Framework; Contents; Preface; Acknowledgments; 1 Introduction; 1.1 Concern for river health; 1.2 Geomorphic perspectives on ecosystem approaches to river management; 1.3 What is river restoration?; 1.4 Determination of realistic goals in river rehabilitation practice; 1.5 Managing river recovery processes in river rehabilitation practice; 1.6 Overview of the River Styles framework; 1.7 Layout and structure of the book; PART A The geoecological basis of river management 2 Spatial considerations in aquatic ecosystem management2.1 Introduction and chapter structure; 2.2 Spatial scales of analysis in aquatic geoecology: A nested hierarchical approach; 2.3 Use of geomorphology as an integrative physical template for river management activities; 2.4 Working with linkages of biophysical processes; 2.5 Respect diversity; 2.6 Summary; 3 Temporal considerations in aquatic ecosystem management; 3.1 Chapter structure; 3.2 Working with river change; 3.3 Timescales of river adjustment; 3.4 Interpreting controls on river character and behavior

3.5 Predicting the future in fluvial geomorphology3.6 Summary and implications; PART B Geomorphic considerations for river management; 4 River character; 4.1 Introduction: Geomorphic approaches to river characterization; 4.2 Channel bed morphology; 4.3 Bank morphology; 4.4 Channel morphology: Putting the bed and banks together; 4.5 Channel size; 4.6 Floodplain forms and processes; 4.7 Channel planform; 4.8 Valley confinement as a determinant of river morphology; 4.9 Synthesis; 5 River behavior; 5.1 Introduction: An approach to interpreting river behavior
5.2 Ways in which rivers can adjust: The natural capacity for adjustment5.3 Construction of the river evolution diagram; 5.4 Bed mobility and bedform development; 5.5 Adjustments to channel shape; 5.6 Interpreting channel behavior through analysis of instream geomorphic units; 5.7 Adjustments to channel position on the valley floor; 5.8 Use of geomorphic units as a unifying attribute to assess river behavior; 5.9 Synthesis; 6 River change; 6.1 Introduction; 6.2 Framing river evolution in context of Late Quaternary climate change; 6.3 The nature of river change
6.4 Framing river change on the river evolution diagram6.5 The spatial distribution of river change; 6.6 Temporal perspectives of river change; 6.7 Appraising system vulnerability to change; 7 Geomorphic responses of rivers to human disturbance; 7.1 Introduction: Direct and indirect forms of human disturbance to rivers; 7.2 Direct human-induced changes to river forms and processes; 7.3 Indirect river responses to human disturbance; 7.4 Spatial and temporal variability of human impacts on rivers; 7.5 (Ir)reversibility and the river evolution diagram revisited; 7.6 Synopsis
PART C The River Styles framework

Sommario/riassunto

This book outlines a generic set of procedures, termed the River Styles Framework, which provides a set of tools for interpreting river character, behavior, condition, and recovery potential. Applications of the framework generate a coherent package of geomorphic information, providing a physical template for river rehabilitation activities. management and restoration of rivers is a rapidly growing topic for environmental scientists, geologists and ecologists - this book provides a learning tool with which to approach geomorphic applications to river management describes the es