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Altri autori (Persone)	BeechieT. J (Tim J.)
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Nota di contenuto	Title page; Copyright page; Contents; List of Contributors; Foreword; Series Editor's Preface; Preface; 1: Introduction to Restoration: Key Steps for Designing Effective Programs and Projects; 1.1 Introduction; 1.2 What is restoration?; 1.3 Why is restoration needed?; 1.4 History of the environmental movement; 1.5 History of stream and watershed restoration; 1.6 Key steps for planning and implementing restoration; 1.7 References; 2: Watershed Processes, Human Impacts, and Process-based Restoration; 2.1 Introduction; 2.2 The hierarchical structure of watersheds and riverine ecosystems 2.3 The landscape template and biogeography 2.4 Watershed-scale processes; 2.4.1 Runoff and stream flow; 2.4.2 Erosion and sediment supply; 2.4.3 Nutrients; 2.5 Reach-scale processes; 2.5.1 Riparian

processes; 2.5.2 Fluvial processes: Stream flow and flood storage; 2.5.3 Fluvial processes: Sediment transport and storage; 2.5.4 Channel and floodplain dynamics; 2.5.5 Organic matter transport and storage; 2.5.6 Instream biological processes; 2.6 Common alterations to watershed processes and functions; 2.6.1 Alteration of watershed-scale processes; 2.6.2 Alteration of reach-scale processes; 2.6.3 Direct manipulation of ecosystem features; 2.7 Process-based restoration; 2.7.1 Process-based principles for restoration; 2.7.2 Applying the principles to restoration; 2.8 Summary; 2.9 References; 3: Watershed Assessments and Identification of Restoration Needs; 3.1 Introduction; 3.2 The role of restoration goals in guiding watershed assessments; 3.2.1 Stating restoration goals; 3.2.2 Designing the watershed assessment to reflect restoration goals and local geography; 3.3 Assessing causes of habitat and biological degradation; 3.3.1 Use of landscape and river classification to understand the watershed template; 3.3.2 Assessing watershed-scale (non-point) processes; 3.3.3 Assessing reach-scale processes; 3.4 Assessing habitat alteration; 3.4.1 Habitat type and quantity; 3.4.2 Water quality; 3.5 Assessing changes in biota; 3.5.1 Single-species assessment; 3.5.2 Multi-species assessment; 3.6 Assessing potential effects of climate change; 3.7 Identifying restoration opportunities; 3.7.1 Summarize the watershed assessment results and identify restoration actions; 3.7.2 Develop a restoration strategy; 3.7.3 Summarize constraints on restoration opportunities; 3.7.4 Climate change considerations; 3.8 Case studies; 3.8.1 Skagit River, Washington State, USA; 3.8.2 River Eden, England, UK; 3.9 Summary; 3.10 References; 4: The Human Dimensions of Stream Restoration: Working with Diverse Partners to Develop and Implement Restoration; 4.1 Introduction; 4.2 Setting the stage: Socio-political geography of stream restoration; 4.2.1 Nature of the challenge; 4.2.2 Understanding property and property rights; 4.2.3 Landscapes of restoration; 4.2.4 Understanding landowner/manager and agency objectives; 4.2.5 Why understanding socio-political geography is important

Sommario/riassunto

With 2 billion spent annually on stream restoration worldwide, there is a pressing need for guidance in this area, but until now, there was no comprehensive text on the subject. Filling that void, this unique text covers both new and existing information following a stepwise approach on theory, planning, implementation, and evaluation methods for the restoration of stream habitats. Comprehensively illustrated with case studies from around the world, Stream and Watershed Restoration provides a systematic approach to restoration programs suitable for graduate and upper-level undergrad
