Record Nr. UNINA9910480821903321 Autore Mangelsdorf Joachim Titolo River Morphology [[electronic resource]]: A Guide for Geoscientists and Engineers / / by Joachim Mangelsdorf, Karl Scheurmann, Fritz-Heinz Weiß Pubbl/distr/stampa Berlin, Heidelberg:,: Springer Berlin Heidelberg:,: Imprint: Springer, , 1990 ISBN 3-642-83777-8 Edizione [1st ed. 1990.] Descrizione fisica 1 online resource (XIII, 243 p. 4 illus.) Collana Springer Series in Physical Environment, , 0937-3047; ; 7 910 Disciplina Soggetti Geography Geotechnical engineering Sedimentology Water pollution Soil science Soil conservation Engineering geology Engineering—Geology **Foundations** Hydraulics Geography, general Geotechnical Engineering & Applied Earth Sciences Waste Water Technology / Water Pollution Control / Water Management / Aquatic Pollution Soil Science & Conservation Geoengineering, Foundations, Hydraulics Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Bibliographic Level Mode of Issuance: Monograph Includes bibliographical references and indexes. Nota di bibliografia Nota di contenuto 1 Introduction -- 2 Historic Overview -- 3 Hydraulics of Stream Flow --3.1 Basic Laws of Channel Hydraulics -- 3.2 Influence of the Earth's Rotation -- 3.3 Density Currents -- 4 Sediments -- 4.1 Differentiation

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an Interconnected System -- 5.2 River Channel Patterns -- 5.3 Longitudinal Section -- 5.4 Cross-Section -- 5.5 Fargue's Laws -- 5.6 Regime Theory -- 6 Classification of Rivers -- 6.1 Drainage Basins, Divides, and Their Structural Controls -- 6.2 Drainage Density, Channel Frequency -- 6.3 Drainage Systems, Types of Rivers -- 7 River History -- 7.1 River History as Part of Geological History -- 7.2 River History as Part of the History of Civilization -- 8 Investigations in River Morphology -- 8.1 Methods -- 8.2 Examples for Degradation of River Beds Below Barrages and Weirs -- 8.3 Possibilities for Rehabilitation of Degradation Stretches -- References -- Authors Index.

## Sommario/riassunto

River Morphology deals with the interaction between flowing waters in rivers and their environment. Based on the representation of basic flow parameters, the geometry, classification and historic development of rivers are treated. Any change in the environment, occurring naturally or caused by man, leads to very sensitive reactions in river flow and transport. Thus this synopsis of geoscientific studies and hydraulic engineering experience is presented to help develop the unterstanding of how to handle nature with care.