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Nota di contenuto	PART 1 Introduction to Open Channel Floes; Introduction; Fundamentals of open channel flows.; PART 2 Turbulent Mixing and Dispersion in Rivers and Estuaries: An Introduction; Introduction to mixing and dispersion in natural waterways; Turbulent shear flows; Diffusion: basic theory; Advective diffusion; Turbulent dispersion and mixing: 1 Vertical and transverse mixing; Turbulent dispersion and mixing: 2. Longitudinal dispersion; Turbulent dispersion in natural systems; Mixing in estuaries: Part 2 Revision exercises; PART 3 Introduction to Unsteady Open Channel Flows; Unsteady open channel flows: 1. Basic equations; Unsteady open channel flows: 2. Applications; Unsteady open channel flows: 3. Application to dam break wave; Numerical modelling of unsteady open channel flows; Revision exercises. PART 4 Interactions between Flowing Water and its Surroundings: Introduction; Interaction between flowing water and solid boundaries: sediment processes; Interaction between flowing water and free surfaces: self aeration and air entrainment
Sommario/riassunto	Environmental Hydraulics is a new text for students and professionals studying advanced topics in river and estuarine systems. The book contains the full range of subjects on open channel flows, including mixing and dispersion, Saint-Venant equations method of

characteristics and interactions between flowing water and its surroundings (air entrainment, sediment transport). Following the approach of Hubert Chanson's highly successful undergraduate textbook *Hydraulics of Open Channel Flow*, the reader is guided step-by-step from the basic principles to more advanced practical applications. Each section of the book contains many revision exercises, problems and assignments to help the reader test their learning in practical situations. Complete text on river and estuarine systems in a single volume Step-by-step guide to practical applications Many worked examples and exercises
