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Nota di contenuto	Frontmatter -- Contents -- Preface And Acknowledgments -- 1. River Values And Threats -- 2. Global Hydrology, Climate, And River Flow Regimes -- 3. Catchments, Drainage Networks, And Resource Regimes -- 4. River Ecology, The Natural Flow Regime Paradigm, And Hydroecological Principles -- 5. Effects Of Catchment Change And River-Corridor Engineering -- 6. History Of Water Control And Dam Impacts -- 7. Effects Of Dams On Sediment, Thermal, And Chemical Regimes -- 8. Effects Of Dams On Habitat And Aquatic Biodiversity -- 9. Introduction To Environmental Flow Methods -- 10. Hydraulic Rating And Habitat Simulation Methods -- 11. Flow Protection Methods -- 12. Flow Restoration Methods -- 13. Ecological Limits Of Hydrologic Alteration (Eloha) -- 14. Environmental Flow Relationships, Models, And Applications -- 15. Groundwater-Dependent Ecosystems And Threats -- 16. Sustaining Groundwater-Dependent Ecosystems -- 17. Wetlands, Threats, And Water Requirements -- 18. Estuaries, Threats, And Flow Requirements -- 19. Setting Limits To Hydrologic Alteration

Sommario/riassunto

Environmental Flows describes the timing, quality, and quantity of water flows required to sustain freshwater and estuarine ecosystems and the human well-being and livelihoods that depend upon them. It answers crucial questions about the flow of water within and between different kinds of ecosystems. What happens when the flow or the availability of water is curtailed or diverted, either naturally or by human activity? How will climate change alter the availability of water and impact aquatic ecosystems? Methodological developments from the simplest hydrological formulas to large-scale frameworks that inform water management make this book a must-read for water managers and freshwater and estuarine ecologists contending with ever-changing conditions influencing the flow of water.