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Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters and indexes.
Nota di contenuto	1. Introduction -- Part I: Techniques -- 2. Meteorological Observations -- 3. Catchment Monitoring -- 4. Meteorological Forecasting -- Hydrological Forecasting -- 6. Demand Forecasting -- 7. Forecast Interpretation -- Part II: Selected Applications -- 8. River floods -- 9. Flash Floods -- 10. Droughts -- 11. Flow Control -- 12. Environmental Impacts -- 13. Water Resources.
Sommario/riassunto	This second edition explores some of the latest techniques used to provide forecasts for a wide range of water-related applications in areas such as floods, droughts, water resources and environmental impacts. The practical uses can range from decisions on whether to issue a flood warning through to providing longer-term advice such as on when to plant and harvest crops or how to operate reservoirs for water supply and hydropower schemes. It provides an introduction to the topic for practitioners and researchers and useful background for courses in areas such as civil engineering, water resources, meteorology and hydrology. As in the first edition, the first section considers topics such as monitoring and forecasting techniques, demand forecasting and how forecasts are interpreted when issuing

warnings or advice. Separate chapters are now included for meteorological and catchment monitoring techniques allowing a more in-depth discussion of topics such as weather radar and water quality observations. The chapters on meteorological and hydrological forecasting now include a greater emphasis on rainfall forecasting and ensemble and probabilistic techniques. Regarding the interpretation of forecasts, an updated chapter discusses topics such as approaches to issuing warnings and the use of decision support systems and risk-based techniques. Given the rapid pace of development in flash flood forecasting techniques, flash floods and slower responding riverine floods are now considered in separate chapters. This includes more detail on forecasting floods in large river basins and on methods for providing early warnings of debris flows, surface water flooding and ice jam and dam break floods. Later chapters now include more information on developing areas such as environmental modelling and seasonal flow forecasting. As before examples of operational systems are provided throughout and the extensive sets of references which were a feature of the first edition have been revised and updated. Key themes • floods • droughts • meteorological observations • catchment monitoring • meteorological forecasts • hydrological forecasts • demand forecasts • reservoirs • water resources • water quality • decision support • data assimilation • probabilistic forecasts Kevin Sene is a civil engineer and researcher with wide experience in flood risk management, water resources and hydrometeorology. He has previously published books on flood warning, forecasting and emergency response and flash floods (Springer 2008, 2013).