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Titolo	Ecotechnologies for the Treatment of Variable Stormwater and Wastewater Flows [[electronic resource] /] / edited by Katharina Tondera, Godecke-Tobias Blecken, Florent Chazarenc, Chris C. Tanner
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2018
ISBN	3-319-70013-8
Edizione	[1st ed. 2018.]
Descrizione fisica	1 online resource (IX, 127 p. 42 illus., 25 illus. in color.)
Collana	SpringerBriefs in Water Science and Technology, , 2194-7244
Disciplina	551.488
Soggetti	Water pollution Water quality Environmental engineering Biotechnology Sustainable development Waste management Environmental sciences Waste Water Technology / Water Pollution Control / Water Management / Aquatic Pollution Water Quality/Water Pollution Environmental Engineering/Biotechnology Sustainable Development Waste Management/Waste Technology Environmental Science and Engineering
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Introduction -- Treatment techniques for variable flows -- Nutrient removal from variable stormwater flows -- Microbial loads and removal efficiency under varying flows -- Metals: occurrence, treatment efficiency and accumulation under varying flows -- Emerging contaminants: occurrence, treatment efficiency and accumulation under varying flows -- Modelling under varying flows.
Sommario/riassunto	This book provides an essential overview of ecotechnologies (also

known as green infrastructure or nature-based solutions) which are considered to be relatively resilient to variations in stormwater and wastewater inflow. In particular, it focuses on various types of constructed wetlands, biofilters and ponds. Stormwater flows are inherently variable, due to rainfall events and fluctuations in loading. This variability has significant effects on the performance of treatment systems, but has rarely been specifically addressed in design manuals, performance assessments or modelling. The book's respective chapters cover the main contaminant categories of interest (nutrients, faecal microbes, metals and emerging contaminants) and their removal processes using ecotechnologies, addressing urban, industrial and agricultural applications. In addition, they review modelling tools with the potential to improve our understanding of flow variability and the ability to simulate and predict responses to it.

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