Throughout history, the first and foremost role of urban water management has been the protection human health and the local aquatic environment. To this end, the practice of (waste-)water treatment has maintained a central focus on the removal of pollutants through dissipative pathways. Approaches like – in case of wastewater treatment – the activated sludge process, which make ‘hazardous things’ disappear, have benefitted our society tremendously by safeguarding human and environmental health. While conventional (waste-)water treatment is regarded as one of the greatest engineering achievements of the 20th century, these dissipative approaches will not suffice in the 21st century as we enter the era of the circular economy. A key challenge for the future of urban water management is the need to re-envision the role of water infrastructure, still holding paramount the safeguard of human and environmental health while also becoming a more proactive force for sustainable development through the recovery of resources embedded in urban water. This book aims (i) to explain the basic principles governing resource recovery from water (how much is there, really); (ii) to provide comprehensive overview and critical assessment of the established and emerging technologies for resource recovery from water; and (iii) to put resource recovery from water in a legal, economic (including the economy of scale of recovered products), social (consumer’s point of view), and environmental sustainability framework. This book serves as a powerful teaching tool at the graduate entry master level with an aim to developing the next generation of engineers and experts and is also highly relevant for seasoned water professionals and practicing engineers.