Commercial Rainwater Harvesting System Projects
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This report describes sustainability, its benefits, and identifies different applications in traditional airport construction and everyday maintenance projects. An accompanying CD-ROM, CRP-CD-125, provides an Airport Sustainability Assessment Tool (ASAT) that complements the guidebook and can be used to: assist the user in identifying sustainability initiatives that might be most applicable to an airport project, given certain criteria that the user sets; obtain more information about specific strategies; and learn about sustainability initiatives that have been implemented at other airports through case studies. The guidebook and the CD-ROM will be useful to environmental managers, planners, and consultants interested in adopting sustainability strategies and initiatives into their next airport project--

Business in Malaysia for Everyone: Practical Information and Contacts for Success

Drained by a half-dozen major watersheds, cut by a network of deep ravines and fronting on a Great Lake, Toronto is a city dominated by water. Recently, the trend of fettering Toronto's water and putting it underground has been countered by persistent citizen-led efforts to recall and restore the city's surface water. In HTO: Toronto's Water from Lake Iroquois to Lost Rivers to Low-flow Toilets, thirty-four contributors examine the ever-changing interplay between nature and culture, and call into question the city's past, present and future engagement with water. HTO explores everything from waste disposal, waterfront reclamation and community watershed initiatives to the founding of the Toronto and Region Conservation Authority after
Hurricane Hazel, a psychogeographic exploration of High Level Pumping Station and a critical look at the city's Wet Weather Flow Management Master Plan. In between, there are descriptions of Toronto's geological past, the history of TaddleCreek and a Ninjalicious-style tale of infiltration of the city's storm sewers, complete with a colour-image section. Together, these essays provide a context for a critical observation of the city's relationship to water, and how that relationship will have to change in the coming decades. Includes essays by Richard Anderson, Bert Archer, Chris Bilton, James Brown, Michael Cook, Nick Eyles, Liz Forsberg, Mark Fram, Ed Freeman, Chris Hardwicke, Michael Harrison, Maggie Helwig, Lorraine Johnson, Joanna Kidd, John Lorinc, Robert MacDonald, Steven Manell, Michael McMahon, Shawn Micallef, Gary Miedema, Helen Mills, Mahesh Patel, Wayne Reeves, Frank Remiz, RiverSides, David Robertson, Jane Schmidt, Murray Seymour, Eduardo Sousa, Andrew Stewart, Kim Storey, Ron Williamson and Georgia Ydreos. 'HTO fittingly reminds readers ... that we have astonishing power to enact change ... invaluable' - Canadian Water Treatment 'poignant reminder to any city-dweller of the cultural, historical and environmental importance of fresh water, public health, lakes, rivers and streams' - Canadian Architect 'an intense and multifaceted approach to the relationship between the natural and urban world.' - Corporate Knights

This book brings together the experiences of engineers and scientists from Australia and the United Kingdom providing the current status on the management of stormwater and flooding in urban areas and suggesting ways forward. It forms a basis for the development of a framework for the implementation of integrated and optimised storm water management strategies and aims to mitigate the adverse impacts of the expanding urban water footprint. Among other
topics it also features management styles of stormwater and flooding and describes biodiversity and ecosystem services in relation to the management of stormwater and the mitigation of floods. Furthermore, it places an emphasis on sustainable storm water management measures. Population growth, urbanisation and climate change will pose significant challenges to engineers, scientists, medical practitioners, policy makers and practitioners of several other disciplines. If we consider environmental and water engineers, they will have to face challenges in designing smart and efficient water systems which are robust and resilient to overcome shrinking green spaces, increased urban heat islands, damages to natural waterways due to flooding caused by increased stormwater flow. This work provides valuable information for practitioners and students at both senior undergraduate and postgraduate levels.

This book offers key resource materials developed for an international training course on Rainwater Harvesting and Utilization hosted annually by the Gansu Research Institute for Water Conservancy in Lanzhou, China since 2003. Topics cover the design, construction and management of rainwater harvesting systems for domestic water supply and supplementary irrigation, rainwater quality issues and runoff farming. It presents case studies from successful rainwater-harvesting projects both in China and around the globe, and provides readers with essential information and inspiration alike. It is a valuable resource for researchers, practitioners and students in the area of water management, agriculture and sustainable development. Qiang Zhu is a research professor at Gansu Research Institute for Water Conservancy, Lanzhou, China; John Gould is a rainwater harvesting consultant based in Christchurch, New Zealand; Yuanhong Li is a research professor at Gansu Research Institute
for Water Conservancy, Lanzhou, China; Chengxiang Ma is an engineer at Gansu Research Institute for Water Conservancy, Lanzhou, China.

This volume presents nine chapters prepared by international authors and highlighting various aspects of climate change and water resources. Climate change models and scenarios, particularly those related to precipitation projection, are discussed and uncertainties and data deficiencies that affect the reliability of predictions are identified. The potential impacts of climate change on water resources (including quality) and on crop production are analyzed and adaptation strategies for crop production are offered. Furthermore, case studies of climate change mitigation strategies, such as the reduction of water use and conservation measures in urban environments, are included. This book will serve as a valuable reference work for researchers and students in water and environmental sciences, as well as for governmental agencies and policy makers.

New Trends in Urban Drainage ModellingUDM 2018Springer

2016 Silver Nautilus Book Award Winner for Green Living & Sustainability Are you facing drought or water shortages? Gardening with Less Water offers simple, inexpensive, low-tech techniques for watering your garden much more efficiently — using up to 90 percent less water for the same results. With illustrated step-by-step instructions, David Bainbridge shows you how to install buried clay pots and pipes, wicking systems, and other porous containers that deliver water directly to a plant’s roots with little to no evaporation. These systems are available at hardware stores and garden centers; are easy to set up and use; and work for garden beds, container gardens, and trees.

Lakes, wetlands and coastal regions provide essential services critical to the survival of
human, wildlife and, by and large, the ecosystems, which are constantly threatened by anthropogenic activities, environmental degradation and climate change. Marine resources, particularly mangroves and corals, are vulnerable to coastal developments, including coastal reclamation, and human settlements that discharge large quantities of wastes into the seas. Climate change impacts, such as increased salt intrusion and sea level rise, may additionally induce regime shifts detrimental to these delicate ecosystems. And the warmer climate has increased the frequency, duration and intensity of catastrophic coastal disturbances, implicating profound uncertainty to the sustainability of coastal infrastructures and resources essential for human populations. This book is written for students, researchers and practitioners pursuing teaching and research related to sustainable development, and the United Nations' Sustainable Development Goals (UNSDGs). It provides a unique approach on sustainable development, viewed from the perspectives of providing solutions via model simulation, to solve sustainable development issues related to human population growth, and impacts due to climate change. It provides the scientific knowledge and technical skills necessary to achieve valuable insights for mitigating the predicted adverse impacts and for developing sustainable development strategies, incorporating climate and environmental adaptations. Climate change, demand for development and already deteriorating state of ecosystems produce an immediate need for innovative opportunities enabling development and human well-being without undermining ecosystem services. Rainwater harvesting creates synergies by upgrading rainfed agriculture and enhancing productive landscapes. The publication describes rainwater harvesting systems, their roles and impacts. It focuses to both negative and positive aspects of using technology and explains how we can decrease constraints and build upon
benefits. It examines 29 cases of different economic activities including forestry, agriculture, watershed development and, rural and urban development. State-of-the-art handbook of community water supplies. The leading source of information on water quality, water treatment, and quality control for 60 years is now available in an up-to-the-minute new edition. The American Water Works Association's Water Quality & Treatment, Fifth Edition fully covers the field, bringing you the expertise of 20 distinguished specialists who provide the latest information on everything from aeration and coagulation processes, to chemical oxidation and water plant waste management. At least 90% of the material in this new edition has been revised and updated. Among the areas of special concern covered are: *Cutting-edge membrane processes *U.S. regulatory changes, including new rulings on disinfection by-products *Current concerns with preventing cryptosporidium and e. coli outbreaks *Enhanced removal of total organic carbon *Much, much more

The present book describes in detail all aspects of rainwater harvesting, including the basic concepts, procedures, opportunities and practice of rainwater harvesting mainly focusing its application in buildings of various occupancies and sizes. It provides a user-friendly methodology for the planning, design, construction and maintenance of rainwater harvesting infrastructure, in buildings and its premise, as a supplement to conventional water supplies. It highlights the application of plumbing technology, which is an important aspect of rainwater harvesting in buildings. It also includes global rainfall scenario and brief notes on all the elements of rainwater harvesting used in buildings. It is a valuable reference resource for policy and decision-makers, as well as for engineers, architects and students. This book is a guide to a sustainable design process that moves from theory, to site and
energy use, to building systems, and finally to evaluation and case studies, so you can integrate design and technology for effective sustainable building. Kuppaswamy Iyengar shows you how to get it right the first time, use free energy systems, and utilise technologies that minimize fossil fuel use. Each chapter has a sustainable design overview, technical details and strategies marked by clear sections, a summary, and further resources. Heavily illustrated with charts, tables, drawings, photographs, and case studies, the book shows technologies and concepts integrated into cohesive project types, from small and large office spaces to single and multiuse residences, hospitals, schools, restaurants, and warehouses to demonstrate implementing your designs to meet clients' needs now and for the future. Includes an overview of alternate assessment and evaluation systems such as BREEAM, CASBEE, GBTool, Green Globes alongside LEED, ECOTECT, energy 10, HEED and eQuest simulation programs. The guide reveals the importance of the building envelope—walls, superstructure, insulation, windows, floors, roofs, and building materials—on the environmental impact of a building, and has a section on site systems examining site selection, landscape design, thermal impact, and building placement.

In the 21st Century, the world will see an unprecedented migration of people moving from rural to urban areas. With global demand for water projected to outstrip supply in the coming decades, cities will likely face water insecurity as a result of climate change and the various impacts of urbanisation. Traditionally, urban water managers have relied on large-scale, supply-side infrastructural projects to meet increased demands for water; however, these projects are environmentally, economically and politically costly. Urban Water Security argues that cities need to transition from supply-side to demand-side management to achieve urban water
security. This book provides readers with a series of in-depth case studies of leading developed cities, of differing climates, incomes and lifestyles from around the world, that have used demand management tools to modify the attitudes and behaviour of water users in an attempt to achieve urban water security. Urban Water Security will be of particular interest to town and regional planners, water conservation managers and policymakers, international companies and organisations with large water footprints, environmental and water NGOs, researchers, graduate and undergraduate students.

Debates about the future of urban development in many countries have been increasingly influenced by discussions of smart cities. Despite numerous examples of this "urban labelling" phenomenon, we know surprisingly little about so-called smart cities. This book provides a preliminary critical discussion of some of the more important aspects of smart cities. Its primary focus is on the experience of some designated smart cities, with a view to problematizing a range of elements that supposedly characterize this new urban form. It also questions some of the underlying assumptions and contradictions hidden within the concept.

Water harvesting is gaining more and more recognition as a sustainable and resilient water supply options. It is economically viable, socially compatible and environmentally friendly. Water harvesting has proven to be a robust solution to overcome or reduce water shortages all over the world. It is important to understand how to apply this practice in a sustainable and effective way to make full use of its potential in a world increasingly threatened by water scarcity. The Handbook of Water Harvesting and Conservation: Basic Concepts and Fundamentals is the most comprehensive, up-to-date and applied handbook on water harvesting and conservation yet published. The book’s 30 chapters -- written by 84
outstanding international experts from approximately 20 selected countries faced by drought --
explore, critique and develop concepts and systems for water harvesting. The editors bring
together many perspectives into a synthesis that is both academically based and practical in its
potential applications. The Handbook of Water Harvesting and Conservation: Basic Concepts
and Fundamentals is an important tool for education, research and technical works in the
areas of soil, water and watershed management and is highly useful for drought strategy
planning, flood management and developing techniques to adapt to climate change in urban,
agricultural, forest and rangeland areas.
Examine the current literature, research, and relevant case studies, presented by a team of
international experts, the Urban Water Reuse Handbook discusses the pros and cons of water
reuse and explores new and alternative methods for obtaining a sustainable water supply. The
book defines water reuse guidelines, describes the historical and current
Case Studies from North America, Scandinavia, Japan, and Great Britain demonstrate natural
outdoor teaching environment that support hand-on learning in science, math, language, and
art in ways that nurture healthy imagination and socialization Asphalt to Ecosystems is a
compelling color guidebook for designing and building natural schoolyard environments that
enhance childhood learning and play experiences while providing connection with the natural
world. With this book, Danks broadens our notion of what a well-designed schoolyard should
be, taking readers on a journey from traditional, ordinary grassy fields and asphalt, to explore
the vibrant and growing movement to "green" school grounds in the United States and around
the world. This book documents exciting green schoolyard examples from almost 150 schools
in 11 countries, illustrating that a great many things are possible on school grounds when they
are envisioned as outdoor classrooms for hands-on learning and play. The book's 500 vivid, color photographs showcase some of the world's most innovative green schoolyards including: edible gardens with fruit trees, vegetables, chickens, honey bees, and outdoor cooking facilities; wildlife habitats with prairie grasses and ponds, or forest and desert ecosystems; schoolyard watershed models, rainwater catchment systems and waste-water treatment wetlands; renewable energy systems that power landscape features, or the whole school; waste-as-a-resource projects that give new life to old materials in beautiful ways; K-12 curriculum connections for a wide range of disciplines from science and math to art and social studies; creative play opportunities that diversify school ground recreational options and encourage children to run, hop, skip, jump, balance, slide, and twirl, as well as explore the natural world first hand. The book grounds these examples in a practical framework that illustrates simple landscape design choices that all schools can use to make their schoolyards more comfortable, enjoyable and beautiful, and describes a participatory design process that schools can use to engage their school communities in transforming their own asphalt into ecosystems.

PROSE Award Finalist 2019 Association of American Publishers Award for Professional and Scholarly Excellence As a follow up to his widely acclaimed Sustainable Urbanism, this new book from author Douglas Farr embraces the idea that the humanitarian, population, and climate crises are three facets of one interrelated human existential challenge, one with impossibly short deadlines. The vision of Sustainable Nation is to accelerate the pace of progress of human civilization to create an equitable and sustainable world. The core strategy of Sustainable Nation is the perfection of the design and governance of all neighborhoods to
make them unique exemplars of community and sustainability. The tools to achieve this vision are more than 70 patterns for rebellious change written by industry leaders of thought and practice. Each pattern represents an aspirational, future-oriented ideal for a key aspect of a neighborhood. At once an urgent call to action and a guidebook for change, Sustainable Nation is an essential resource for urban designers, planners, and architects.

As a water-scarce state with deep cultural attachments to private property rights, Texas has taken a unique evolutionary path with regard to water management. This new resource surveys past and current challenges for managing both groundwater and surface water, telling a comprehensive story about water policy in Texas, and identifying opportunities for improving future governance. Texas is the U.S. state that has experimented most thoroughly with water markets. In Water Policy in Texas, experts from broad disciplinary perspectives describe and analyze Texas water laws and management agencies, and the practices of water marketing and rate making in Texas. They explore the unique cases of the Edwards and Ogallala aquifers, the science and policy of environmental water stewardship, the extensive history of formalized water sharing with neighboring states and Mexico, and the opportunities for harnessing new technologies that might aid in addressing scarcity. This multidimensional, interdisciplinary book will be a valuable resource for students and researchers of Texas water policy, as well as for water managers worldwide, particularly those working within contexts of water scarcity.

The book, packed in 22 chapters, provides in-depth and detailed information on different aspects of urban development. Issues, such as education, health, power, transport, stray
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animals, tourism, water, greenery, pollution, waste and sanitation management, disaster management, adulteration, crimes, social life, civic infrastructure, encroachment, unauthorized construction and illegal colonies, which the people in Delhi have been confronting for long, have been covered under the book. As Delhi is the national capital and the mirror of the country, the author has attempted to focus on the development of it as a role model of the urban India, to be replicated by others in respect of issues that affect the day-to-day life of a common man, people of all age groups, sex, religion, region, poor and rich, students, public and private sectors, bureaucrats, businessmen, industrialists and politicians. The book will be of immense value to policymakers, programme planners, public and private sectors, NGOs, social workers, environmental workers, educationists, developmental practitioners and the Delhiites who dream to see Delhi as "a world-class city".

When the rivers run dry--water solutions for a thirsty planet. In the Age of Scarcity now upon us, fresh water shortages are an increasingly serious global problem. With water restrictions emerging in many developed countries and water diversions for industrial, urban, and environmental reasons stirring up oceans of controversy, there is a growing thirst for innovative approaches to reducing our water footprint. Dry Run shows the best ways to manage scarce water resources and handle upcoming urban water crises. Featuring original interviews with more than twenty-five water researchers and industry experts, this book explains water issues and proposes solutions for homes, buildings, facilities, and schools. Examining the vital linkages between water, energy use, urban development, and climate change, Dry Run demonstrates best practices for achieving “net zero” water use in the built environment, including: Water conservation strategies for buildings, factories, cities, and Rainwater
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harvesting Graywater reuse and water reclamation systems Water efficiency retrofits On-site sewage treatment New water reuse and supply technologies Ideal for concerned citizens, building managers, homeowners, architects, engineers, developers, and public officials faced with charting a course in a more arid future, Dry Run overflows with practical solutions. Jerry Yudelson, PE, LEED AP, leads the Yudelson Associates consultancy and is a leading authority on green building, clean water, and sustainable development. He is the author of eleven books, including Choosing Green and Green Building A to Z.

Resilient Water Services and Systems: The Foundation of Well-Being provides an overarching framework on water and sanitation services and how they are coping with resilience, aging infrastructure and climate change. The Editors present conceptual evidence about resilience backed by case studies that demonstrate resilience in practice. There are 13 case studies, from Asia, Africa, Europe and North and South America, providing informative perspectives from around the world. This is a timely collection of historic and contemporary evidence that will have increasing relevance in the coming decades. This volume will be of relevance to both scholars and practitioners. “Resilient water services are the key to water security across the world. Sustaining them is a challenging task in high-income countries where aging infrastructure is a critical issue, and in low-income countries where new infrastructure is needed and ability-to-pay is a more formidable barrier to success. The editors have compiled a succinct analysis and assembled case studies that cover diverse regions and contexts. From this book the reader will gain a wealth of knowledge about water services, as well as rich vicarious experiences from the cases.

Writing Built Environment Dissertations and Projects will help you to write a good
dissertation or project by giving you a good understanding of what should be included, and showing you how to use data collection and analysis tools in the course of your research. Addresses prominent weaknesses in under-graduate dissertations including weak data collection; superficial analysis and poor reliability and validity Includes many more in-depth examples making it easy to understand and assimilate the concepts presented Issues around study skills and ethics are embedded throughout the book and the many examples encourage you to consider the concepts of reliability and validity Second edition includes a new chapter on laboratory based research projects Supporting website with sample statistical calculations and additional examples from a wider range of built environment subjects

Save the earth’s most precious resource while also saving yourself money. Laura Allen provides expert strategies for using water smartly and efficiently while fulfilling all of your home and garden needs. Learn how to create a water-wise landscape, reuse greywater, harvest rainwater, and even set up a waterless composting toilet. Offering proven techniques in clear and accessible language, The Water-Wise Home makes it easy to help the environment and lower your household operating costs through conserving water.

Water conservation is one of the most effective sustainable design practices, yet few professionals know how to collect and use rainwater effectively. Rainwater Harvesting the first comprehensive book on designing rainwater harvesting systems. It provides
practical guidelines for developing a rainwater harvesting strategy, taking into account climate, public policies, environmental impact, and end uses. Case studies are included throughout. Rainwater Harvesting is a valuable reference for architects, landscape architects, and site engineers.

The book explores the geo-chemical, physical, social and economic impacts of climate change on water supplies. It contains examples and case studies from a wide range of countries, and addresses the need to promote sustainable water use across the world. This book guides architects, landscape designers, urban planners, agronomists and society on the implementation of sustainable rooftop farming projects. The interdisciplinary team of authors involved stresses the different approaches and the multi-faceted forms that rooftop farming may assume in any context. While rooftop farming experiences are sprouting all over the world the need for scientific evidence on the most suitable growing solutions, policies and potential benefits emerges. This volume brings together existing experiences as well as suggestions for planning future sustainable cities.

An essential addition to the landscape design library Nature devises ingenious systems for the management and delivery of water in all its phases. No additional infrastructure is required—the water systems are in place, naturally. But once the natural environment has been disrupted by human development, stormwater becomes an issue that requires intervention and ongoing management. Sustainable Stormwater Management,
by leading expert Tom Liptan, provides landscape students and professionals with a green approach to landscape design. The hardworking book includes comprehensive information on how to design, install, and maintain a landscape for sustainable stormwater management. It addresses stormwater in the urban environment, relevant environmental and economic policies, and shares case studies of exemplary projects from around the world.

Chronic and episodic water shortages are becoming common in many regions of the United States, and population growth in water-scarce regions further compounds the challenges. Increasingly, alternative water sources such as graywater-untreated wastewater that does not include water from the toilet but generally includes water from bathroom sinks, showers, bathtubs, clothes washers, and laundry sinks- and stormwater-water from rainfall or snow that can be measured downstream in a pipe, culvert, or stream shortly after the precipitation event-are being viewed as resources to supplement scarce water supplies rather than as waste to be discharged as rapidly as possible. Graywater and stormwater can serve a range of non-potable uses, including irrigation, toilet flushing, washing, and cooling, although treatment may be needed. Stormwater may also be used to recharge groundwater, which may ultimately be tapped for potable use. In addition to providing additional sources of local water supply, harvesting stormwater has many potential benefits, including energy savings, pollution prevention, and reducing the impacts of urban development on urban streams.
Similarly, the reuse of graywater can enhance water supply reliability and extend the capacity of existing wastewater systems in growing cities. Despite the benefits of using local alternative water sources to address water demands, many questions remain that have limited the broader application of graywater and stormwater capture and use. In particular, limited information is available on the costs, benefits, and risks of these projects, and beyond the simplest applications many state and local public health agencies have not developed regulatory frameworks for full use of these local water resources. To address these issues, Using Graywater and Stormwater to Enhance Local Water Supplies analyzes the risks, costs, and benefits on various uses of graywater and stormwater. This report examines technical, economic, regulatory, and social issues associated with graywater and stormwater capture for a range of uses, including non-potable urban uses, irrigation, and groundwater recharge. Using Graywater and Stormwater to Enhance Local Water Supplies considers the quality and suitability of water for reuse, treatment and storage technologies, and human health and environmental risks of water reuse. The findings and recommendations of this report will be valuable for water managers, citizens of states under a current drought, and local and state health and environmental agencies.

This book presents new research on policy innovations that promote the development of the circular water economy. In contrast to the linear economy, the circular water economy promotes the reduction of water consumption, reuse of water, and recovery of
resources from wastewater to not only increase resilience to climate change but also to reduce greenhouse gas emissions resulting from the provision of water and wastewater-related services. Providing a series of in-depth case studies of important locations in differing climates around the globe that have implemented a variety of policy innovations to develop the circular water economy, this book is a valuable resource for water and resource conservation managers, policymakers, international companies and organisations interested in the circular economy, environmental NGOs, researchers, as well as graduate and undergraduate students.

- Systematically reviews policy innovations to develop the circular water economy
- Illustrates how leading locations from around the world have developed the circular water economy to increase resilience to climate change while reducing emissions
- Provides ‘best practices’ for other locations around the world aiming to implement the circular water economy

Water saving is an important aspect civil engineering and building design around the world. Alternative water sources as well as water saving appliances have been studied by many researchers in order to maximize water savings in buildings and promote building design that favours water savings. This volume explores topics related to water savings: rainwater tank sizing and modelling, wastewater treatment and reuse, relationships between user behaviour and water savings, health issues related to water savings and environmental analysis.
innovative use of rainwater and grey water use in buildings. Water Savings in Buildings is a handy resource for researchers, post-graduate students, undergraduate students and engineers working in water utilities, environment agencies and associated industries interested in understanding the basics of implementing systems to achieve water savings in buildings.

This book addresses the latest research advances, innovations, and applications in the field of urban drainage and water management as presented by leading researchers, scientists and practitioners from around the world at the 11th International Conference on Urban Drainage Modelling (UDM), held in Palermo, Italy from 23 to 26 September, 2018. The conference was promoted and organized by the University of Palermo, Italy and the International Working Group on Data and Models, with the support of four of the world’s leading organizations in the water sector: the International Water Association (IWA), International Association for Hydro-Environment Engineering and Research (IAHR), Environmental & Water Resources Institute (EWRI) - ASCE, and the International Environmental Modelling and Software Society (iEMSs). The topics covered are highly diverse and include drainage and impact mitigation, water quality, rainfall in urban areas, urban hydrologic and hydraulic processes, tools, techniques and analysis in urban drainage modelling, modelling interactions and integrated
systems, transport and sewer processes (incl. micropollutants and pathogens), and water management and climate change. The conference’s primary goal is to offer a forum for promoting discussions amongst scientists and professionals on the interrelationships between the entire water cycle, environment and society. Water harvesting is gaining more and more recognition as the sustainable and resilient alternative to other water supply options. It is economically viable, socially compatible and environmentally friendly. Water harvesting has proven to be a robust solution to overcome or reduce water shortages all over the world. To apply this in a sustainable and effective way, it is important to understand exactly where it can be applied to make full use of its potential. The Handbook of Water Harvesting and Conservation: Case Studies and Application Examples is the most comprehensive, up-to-date and applied casebook on water harvesting and conservation yet published. The editors bring together the many perspectives into a synthesis that is both academically-based and practical in its potential applications. The Handbook of Water Harvesting and Conservation: Case Studies and Application Examples will be an important tool for education, research and technical works in the soil, water and watershed management area, and will be highly useful for drought strategy planning, flood management and adaptation to climate change in all urban, agricultural, forest, rangeland areas.
A guide to alternate water collection for green new developments, aimed at conserving water and reusing it wisely. In an era of dwindling resources, water is poised to become the new oil as the entire world now faces the reality of a decreasing supply of clean water. To avert a devastating shortage, we must not only look at alternate water sources for existing structures, we must also plan our new developments differently. Design for Water is an accessible and clearly written guide to alternate water collection, with a focus on rainwater harvesting in the urban environment. The book: outlines the process of water collection from multiple sources—landscape, residential, commercial, industrial, school, park and municipal systems provides numerous case studies details the assembly and actual application of equipment includes specific details, schematics and references All aspects of rainwater harvesting are outlined, including passive and active system set-up, storage, stormwater reuse, distribution, purification, analysis and filtration. There is even a section on rainwater harvesting for wildlife. In addition to rainwater, there are several affordable and accessible alternate sources, including cooling tower bleed-off water, air conditioning condensate, gray water, and fog collection. Design for Water is geared to providing those making development decisions and guidelines with the information they need to set up passive harvesting techniques. The book will especially appeal to
Innovative engineers, landscape architects, municipal decision-makers, developers and landowners.

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