

## *Stormwater Runoff And Receiving Systems Impact Monitoring And Assessment*

**The latest book in the popular series demonstrates state-of-the-art methods, models, and techniques for water quality management. This book includes a CD-ROM that collects hundreds of hard-to-find literature citations from the gray literature.**

**Industrial stormwater is derived from precipitation and/or runoff that comes in contact with industrial manufacturing, processing, storage, or material overburden and then runs offsite and enters drainage systems or receiving waters. In 1987, Congress significantly expanded the National Pollutant Discharge Elimination System (NPDES) program through amendments to the Clean Water Act to include industrial stormwater runoff conveyed through outfalls directly to receiving waters or indirectly through municipal separate storm sewer systems. The added regulation of stormwater in the NPDES program has been challenging. Stormwater is produced throughout a developed landscape, and its production and delivery are episodic. In 2009, the National Research Council released a comprehensive report on the Environmental Protection Agency's Stormwater Program that covered all sectors of the program. This study builds on that report, with a focus on industrial stormwater monitoring and management. This timely volume examines the work of the National Estuary Program, the prominent federally-funded initiative dealing with pollution and other anthropogenic impacts on estuarine ecosystems and the management plans necessary to ensure that these invaluable natural treasures remain healthy and productive for future generations. Estuary Resto**

**Introducing Biafra**

**Proceedings, Chicago, IL, February 9-12, 1998**

**Proceedings of an Engineering Foundation Conference**

**Improving the EPA Multi-Sector General Permit for Industrial Stormwater Discharges**

**Wild Salmonids in the Urbanizing Pacific Northwest**

**Designing Rainwater Harvesting Systems**

**Only in Australasia can the effect of technological societies on river systems be truly analysed and this unique, accessible book covers key issues in river management from a geomorphological perspective. Australia and New Zealand were colonised only 200 years ago by central bureaucratic**

**administrations. For the whole period of European settlement most river management activities have been carried out by government agencies and the record of their activities is relatively complete. These countries therefore provide good case studies for the impact of technological societies on river systems, having transformed their rivers in a short time from their 'natural' into a heavily managed condition. Geomorphology provides the scientific basis for much of our understanding of river behaviour and geomorphologists are now actively involved in the management process. This book provides a collection of case studies, the first to be produced to date, which describe the management of rivers covering issues of environmental flow, stream condition, mining and extractive activities, river channel change, river stabilisation, river regulation and urban streams. The book will prove invaluable to geomorphologists, river engineers, stream ecologists, river managers, and environmental impact assessors involved in river management and restoration.**

**Wild salmon, trout, char, grayling, and whitefish (collectively salmonids) have been a significant local food and cultural resource for Pacific Northwest peoples for millennia. The location, size, and distribution of urban areas along streams, rivers, estuaries, and coasts directly and indirectly alter and degrade wild salmonid populations and their habitats. Although urban and exurban areas typically cover a smaller fraction of the landscape than other land uses combined, they have profound consequences for local ecosystems, aquatic and terrestrial populations, and water quality and quantity.**

**A stand-alone working document, Stormwater Effects Handbook: A Toolbox for Watershed Managers, Scientists, and Engineers assists scientists and regulators in determining when stormwater runoff causes adverse effects in receiving waters. This complicated task requires an integrated assessment approach that focuses on sampling before, during, and after storms. The Handbook supplies assessment strategies, sample testing and collection methods, and includes illustrative figures and tables. The authors introduce an innovative design that can be tailored to address a wide range of environmental concerns, such as: ecological and human health risk assessments, water quality or biological criteria exceedences, use impairment, source identification, trend analysis, determination of best management practices, stormwater quality monitoring for NPDES Phase I and II permits and applications, and total maximum daily load assessments. They provide case studies to illustrate the effectiveness of this approach and the data that can be compiled. Containing reviews of emerging technologies that hold promise for more effective receiving water evaluations, this book gives you detailed information on selecting methods and carrying out**

**comprehensive evaluations. It includes guidance for the experimental design measurements, as well as standard and advanced statistical methods for data evaluations. Despite the complexity of stormwater management, successful and accurate assessments of their impact are possible by following the integrated approaches described in Stormwater Effects Handbook: A Toolbox for Watershed Managers, Scientists, and Engineers. Handbook of Ecotoxicology, Second Edition Urban and Highway Stormwater Pollution Impact, Monitoring, and Assessment Stormwater Runoff and Receiving Systems Data, Models, and Decision Support for Integrated Urban Water Management Advances in Modeling the Management of Stormwater Impacts**

This book is an introduction to hydroinformatics applied to urban water management. It shows how to make the best use of information and communication technologies for manipulating information to manage water in the urban environment. The book covers the acquisition and analysis of data from urban water systems to instantiate mathematical models or calculations, which describe identified physical processes. The models are operated within prescribed management procedures to inform decision makers, who are responsible to recognized stakeholders. The application is to the major components of the urban water environment, namely water supply, treatment and distribution, wastewater and stormwater collection, treatment and impact on receiving waters, and groundwater and urban flooding. Urban Hydroinformatics pays particular attention to modeling, decision support through procedures, economics and management, and implementation in both developed and developing countries. The book is written with post-graduates, researchers and practicing engineers who are involved in urban water management and want to improve the scope and reliability of their systems. The international journal Ecohydrology & Hydrobiology (E&H) has been created to promote the concept of Ecohydrology, which is defined as the study of the functional interrelations between hydrology and biota at the catchment scale. Ecohydrology extends from the molecular level to catchment-scale processes and is based on three principles: • framework (hydrological principle) - quantification and integration of hydrological and ecological processes at a basin scale; • target (ecological principle) - necessity of enhancing ecosystem absorbing capacity and ecosystem services; and • management tool (ecological engineering) – the use of ecosystem properties for regulation the interplay between hydrology and biota. The journal encourages the submission of manuscripts which adopt an integrative approach to aquatic sciences, explaining ecological and hydrological processes at a river-basin scale or propose practical applications of this knowledge. It will also consider papers in other hydrobiological fields. Especially welcome are papers on regulatory mechanism within biocenosis and the resistance and resilience of freshwater and costal zones ecosystems. There is no page charge for published papers. All submitted papers, written exclusively in English, should be original works, unpublished and not under consideration for publication elsewhere. All papers are peer-reviewed. The following

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types of papers are considered for publication in E&H: • original research papers • invited or submitted review papers, • short communications

Stormwater Manufactured Treatment Devices: Certification Guidelines provides a framework for regulatory agencies to create verification and certification programs to assess compact stormwater treatment systems.

Urban Water Management

Proceedings

Stormwater Effects Handbook

Environmental Impact Statement

A Users Guide

Stormwater Manufactured Treatment Devices

*Handbook of Ecotoxicology, Second Edition focuses on toxic substances and how they affect ecosystems worldwide. It presents methods for quantifying and measuring ecotoxicological effects in the field and in the lab, as well as methods for estimating, predicting, and modeling in ecotoxicology studies. Completely revised and updated with 18 new chapters, this second edition includes contributions from over 75 international experts. Also, a Technical Review Board reviewed all manuscripts for accuracy and currency. This authoritative work is the definitive reference for students, researchers, consultants, and other professionals in the environmental sciences, toxicology, chemistry, biology, and ecology - in academia, industry, and government.*

*Urban population growth dramatically alters material and energy fluxes in the affected areas, with concomitant changes in landscape, altered fluxes of water, sediment, chemicals and pathogens and increased releases of waste heat. These changes then impact on urban ecosystems, including water resources and result in their degradation. Such circumstances make the provision of water services to urban populations even more challenging. Changing weather patterns, rising temperature and large variations in precipitation contribute to increased damages, caused by weather related disasters, including floods. One of the major contributors to increasing flood peaks are land use changes and particularly urban development. Consequently, there is a need to look for low environmental impact land development and to manage runoff in urban areas by storm water management. Much progress in the management of urban waters has been achieved in the most advanced jurisdictions, but much more remains to be done. In this respect the EC Water Framework Directive can provide some*

*guidance. Urban water management issues are particularly important in the countries in transition in Central and Eastern Europe. During the last decade political, economical and social changes in the countries under transition have influenced almost every element of the public sector, including water services. There is an urgent need for exchange of information among various countries on this issue and for identification of best approaches to achieving this transition.*

*Hydroinformatics systems are systems that combine computational hydraulic modelling with information systems (including knowledge-based systems). They are gaining rapid acceptance in the areas of environmental planning, design and management. The present book focuses exclusively on sewage systems, starting with their planning and then going on to discuss their design, operation and rehabilitation. The very experienced authors discuss business and information needs in the management of urban drainage, tools for collecting and archiving such data, and their use in modelling catchment hydrology, sewer systems hydraulics, wastewater quality, wastewater treatment plant operation, and receiving waters. The control and operation of sewer systems in real time is described, followed by a discussion of their maintenance and rehabilitation. Intelligent decision support systems for managing the urban drainage business process are presented. Audience: Researchers into sewer design, municipal engineers, planners and managers interested in an innovative approach to all aspects of the planning, design and operation of sewer systems.*

*Proceedings of the NWQMC National Conference*

*Post-project Monitoring of BMPs/SUDS to Determine Performance and Whole-life Costs*

*Monitoring : Critical Foundations to Protect Our Waters : July 7-9, 1998, Reno, Nevada*

*Urban Stormwater Management Planning with Analytical Probabilistic Models*

*Science Technology and Service Delivery Concepts and Engineering*

*The 20th century's automobile-inspired land use changes brought about tremendous transformations in how stormwater moves across the modern urban land-scape. Streets and parking areas in the average urban family's neighborhood now exceed the amount of land devoted to living space. Add parking, office and commercial space, and*

*it's easy to understand how modern cities have experienced a three-fold increase in impervious areas. Traditional wet weather collection systems removed stormwater from urban areas as quickly as possible, often transferring problems downstream. Innovative Urban WetWeather Flow Management Systems does two things: It considers the physical, chemical, and biological characteristics of urban runoff; then describes innovative methods for improving wet weather flow (WWF) management systems. The result of extensive research, Innovative Urban Wet-Weather Flow Management Systems looks most at how to handle runoff in developments of the 21st century: the conflicting objectives of providing drainage while decreasing stormwater pollutant discharges; the impact of urban WWF on surface and groundwater, such as smaller urban stream channels scoured by high peak flows; sediment transport and the toxic effects of WWF on aquatic organisms; the effectiveness of WWF controls-including design guidelines and source and downstream controls-are an important issue. Innovative Urban Wet-Weather Flow Management Systems looks at how source controls like biofiltration, created through simple grading, may work in newly developing areas, while critical source areas like an auto service facilities, may need more extensive treatment strategies. Focusing WWF treatment on intensively used areas, such as the 20 percent of streets that handle the bulk of the traffic, and under utilized parking areas is also considered. Developing a more integrated water supply system-collecting, treating, and disposing of wastewater, and handling urban WWF-requires innovative methods, such as a neighborhood-scale system that would recycle treated wastewater and storm water for lawn watering and toilet flushing, or use treated roof runoff for potable purposes.*

*This book presents research on precipitation partitioning processes in vegetated ecosystems, putting them into a global context. It describes the processes by which meteoric water comes into contact with the vegetation's canopy, typically the first surface contact of precipitation on land. It also discusses how precipitation partitioning by vegetation impacts the amount, patterning, and chemistry of water reaching the surface, as well as the amount and timing of evaporative return to the atmosphere. Although this process has been extensively studied, this is the first review of the global literature on the partitioning of precipitation by forests, shrubs, crops, grasslands and other less-studied plant types. The authors offer global contextualization combined with a detailed discussion of the impacts for the climate and terrestrial ecohydrological systems. As such, this comprehensive overview is a valuable reference tool for a wide range of specialists and students in the fields of geoscience and the environment.*

*Abstract: Pollutant transport within each phase of the hydrologic cycle, and through the various components of the physical system, is governed by the principle of conservation of mass. Deterministic mathematical models are derived from this unifying concept to represent the movement, decay, storage, and treatment of stormwater runoff pollutants and dry weather wastewater flows through the urban environment and, the receiving body of water. Dissertation Discovery Company and University of Florida are dedicated to making scholarly works more discoverable and accessible throughout the world. This dissertation, "Interaction of Urban Stormwater Runoff" by Miguel Angel Medina, was obtained from University of Florida and is being sold with permission from the author. A digital copy of this work may also be found in the university's institutional repository, IR@UF. The content of this dissertation has not been altered in any way. We have altered the formatting in order to facilitate the ease of printing and reading of the dissertation.*

*Precipitation Partitioning by Vegetation*

*Ecohydrology & Hydrobiology*

*Estuary Restoration and Maintenance*

*Hydroinformatics Tools for Planning, Design, Operation and*

*Rehabilitation of Sewer Systems*

*Water-Quality Engineering in Natural Systems*

*Rainwater Harvesting—Building a Water Smart City*

***Consists of papers presented at the Engineering Foundation Conference held in 1994. The objective was to summarize the state of stormwater monitoring with respect to meeting these regulatory requirements. Technical sessions included: an overview of stormwater monitoring needs; locating illicit connections; and system runoff characterization.***

***The pilot watches the instrument panel and prepares for touchdown—a routine landing until a burst of birds, a coyote, or a herd of deer crosses the runway! Every year, pilots experience this tension and many aircraft come into direct contact with birds and other wildlife, resulting in more than one billion dollars in damage annually. The United States Federal Aviation Administration has recorded a rise in these incidents over the past decade due to the combined effects of more reporting, rebounding wildlife populations, and an increased number of flights. Wildlife in Airport Environments tackles the issue of what to do about encounters with wildlife in and around airports—from rural, small-craft airparks to major international hubs. Whether the problem is birds or bats in the flight path or a moose on the runway, the authors provide a thorough overview of the science behind wildlife management at airports. This well-written, carefully documented volume presents a clear synthesis for researchers, wildlife managers, and airport professionals. The book belongs in the hands of all those charged with minimizing the risks that wildlife pose to air travel. Wildlife in Airport Environments is the first book in the series Wildlife Management and Conservation and is published in association with The Wildlife Society. Contributors Michael L. Avery, U.S. Department of Agriculture Jerrold L. Belant, Mississippi State University Kristin M. Biondi, Mississippi State University Bradley F. Blackwell, U.S. Department of Agriculture Jonathon D. Cepek, U.S. Department of***

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***In past decades, urban water management practices focused on optimizing the design and operation of water distribution networks, wastewater collection systems, and water and wastewater treatment plants. However, municipalities are now faced with aging urban water infrastructures whose operation must be improved and expanded to maintain current high***

***Upper Truckee River Restoration and Golf Course Reconfiguration Project***

***Chicago Underflow Plan, Final Phase I GDM, Feasibility Report and EA***

***Urban Water Engineering and Management***

***Retention and Management of Stormwater Runoff with Rain Gardens and Rainwater Harvesting Systems***

***Interaction of Urban Stormwater Runoff***

***Stormwater Management Model (SWMM) Users Group Meeting, 10-11 January 1980***

Detailing the fundamental equations that describe the fate and transport of contaminants in the environment, *Water-Quality Engineering in Natural Systems* covers the practical application of these equations to engineering design and environmental impact analysis relating to contaminant discharges into rivers, lakes, wetlands, ground water, and oceans. This second edition is thoroughly updated to include new topics on nutrient and pathogen models in streams as well as much more coverage of methods to calculate calculating total maximum daily loads (TMDLs). Numerous practical examples and end of chapter problems are included.

The primary focus of stormwater and urban runoff research during the past twenty-five years has been on the physical description and the chemical quality assessment of runoff events and the design and implementation of the best management practices to control these events. There is a definite need for more effective integration of receiving system issues in the management and regulation of stormwater runoff. This book successfully brings together a diverse group of environmental specialists to address the issues surrounding the assessment, management, and control of stormwater, and more specifically urban runoff, from a receiving system perspective. The book's emphasis on the receiving system is timely, coming during a period when the U.S. Environmental Protection Agency is placing increasing emphasis on wet weather conditions through a new permit program for stormwater runoff and a policy on combined sewer overflows. *Stormwater Runoff and Receiving Systems* covers biocriteria, assessment of receiving water integrity, and integrated watershed analysis—all aspects of current water quality management programs for both industrial and municipal areas. More than thirty chapters are divided into six sections, offering in-depth discussions on various issues relating to stormwater, urban runoff, and receiving systems; impacts; uncertainty and risk; study design; impact mitigation; and issues analysis. Anyone who deals with regulatory programs requiring stormwater effect assessment including more than

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sampling and analysis of chemical water quality parameters in effluents will find this reference particularly useful.

"Industrial stormwater is derived from precipitation and/or runoff that comes in contact with industrial manufacturing, processing, storage, or material overburden and then runs offsite and enters drainage systems or receiving waters. In 1987, Congress significantly expanded the National Pollutant Discharge Elimination System (NPDES) program through amendments to the Clean Water Act to include industrial stormwater runoff conveyed through outfalls directly to receiving waters or indirectly through municipal separate storm sewer systems. The added regulation of stormwater in the NPDES program has been challenging. Stormwater is produced throughout a developed landscape, and its production and delivery are episodic. In 2009, the National Research Council released a comprehensive report on the Environmental Protection Agency's Stormwater Program that covered all sectors of the program. This study builds on that report, with a focus on industrial stormwater monitoring and management"--Publisher's description

Integrating Rainwater into Building Systems

Innovative Urban Wet-Weather Flow Management Systems

Selected Water Resources Abstracts

The Structure, Function and Management Implications of Fluvial Sedimentary Systems

Fate and Transport Processes in the Water Environment

Urban Hydroinformatics

**Abstract: The alteration of natural flow regimes associated with land use change increases the volume of stormwater runoff and peak flows, and reduces the time to peak flow after storm events. This can cause flooding, erosion, and higher pollutant loading in receiving waterways. This thesis investigates rain gardens and rainwater harvesting systems as methods to manage stormwater runoff. Rain gardens represent a sustainable and economic method to decrease the volume of water that flows into waterways from impervious areas during storm events. For developments that were built without permanent stormwater controls, rain gardens maybe a helpful retrofit instead of centralized and more costly alternatives. However, there is a lack of knowledge about the behavior and performance of rain gardens in urban retrofit applications. In the rain garden study, we examined the hydrologic performance of terraced, street-side rain gardens by monitoring inflow and outflow volumes and water tables during storm events and simulated experiments. Variation in components of the water balance equation measured during the simulated experiments was used to estimate hydrologic performance. The performance variables quantified were runoff volume reduction, reduction in peak flow, and peak delay. The rain garden terracing design was effective at facilitating stormwater entry despite limited space availability. For eight simulated storm event experiments the street-side rain gardens reduced inflow volume by an overall total of 37% with mean individual event values for volume retention, peak flow reduction, and peak delay of 52%, 62%, and 16 minutes, respectively. Logarithmic relationships between rainfall depth and volume reduction were described for rain gardens of different surface area to catchment area ratios. The results of this study proved that rain gardens can benefit existing developments by reducing runoff volume and peak flow, and provide a dynamic internal saturation zone with the potential for water quality benefits. Our findings also show the importance of understanding interactions with the in situ soil, the**

existing drainage system, and the entire catchment area when sizing rain gardens in urban retrofits. Rainwater harvesting is another method of stormwater runoff capture that can provide environmental benefits while also supplementing municipally supplied water. A decision support tool was developed to determine economic benefits of a rooftop rainwater harvesting system and to size a system. Our goal was to provide an assessment tool that was easy to operate, publically available, and applicable on a global scale. The theory behind the creation of this tool is discussed as well as a description of the tool design. A case study of a rainwater harvesting system in Columbus, Ohio was used to compare real world findings against predictions of the rainwater harvesting decision tool. The case study system had an average tank volume that was at 89% of its capacity over a four-month study period. The rainwater harvesting decision tool showed average tank volumes within 10% of the case study value, indicating that the overall tool performance met expectations. The case study also exposed areas where improvement of the tool is needed which can be addressed through further development and testing.

Both SUDS and BMPs attempt to mimic the drainage p

With the infrastructure to manage storm water threats in cities becoming increasingly expensive to build or repair, the design community needs to look at alternative approaches. Living roofs present an opportunity to compliment ground-level storm water control measures, contributing to a holistic, integrated urban water management system. This book offers tools to plan and design living roofs, in the context of effectively mitigating storm water. Quantitative tools for engineering calculations and qualitative discussion of potential influences and interactions of the design team and assembly elements are addressed.

**Certification Guidelines**

**Living Roofs in Integrated Urban Water Systems**

**A Global Synthesis**

**A User's Guide**

**Investigation of Inappropriate Pollutant Entries Into Storm Drainage Systems**

**National Conference on Retrofit Opportunities for Water Resource Protection in Urban Environments**

As the world population grows, already burgeoning cities are becoming taxed in every conceivable way. One topic that receives few headlines, but significantly impacts an area ' s quality of health and economic development is the challenge to maintain sustainable urban drainage (SUD). Poor drainage can hamper transportation, add to problems of pollution, and compromise essential clean water resources. While a number of references concentrate on the hydrology, hydraulics, and transport phenomena relevant for urban drainage, we must recognize that any solution requires a more comprehensive consideration of the problem. Urban and Highway Stormwater Pollution: Concepts and Engineering offers a comprehensive text on wet weather pollution originating from urban drainage and road runoff. Bringing together the empirical and theoretical approaches needed to mitigate the problem, this volume: Provides a basic understanding of sources, pathways, and impacts of pollutants associated with wet weather hydrologic cycles occurring in areas with impervious or semi-impervious surfaces Examines wet weather pollutant discharges into streams,

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lakes, and coastal waters, as well as soil systems Details tools to quantify physical, chemical, and biological characteristics associated with wet weather pollution and methodologies for pollution abatement, control, and monitoring runoff Offers general methodologies and site-specific approaches to deal with stormwater runoff, road runoff, and sewer overflows Supplies reliable predictive tools and modeling methods SUD is rapidly becoming a problem of crisis proportions; but while we must act quickly, any solution must be based on sound principles, accurate data, and proven methods. Written by top researchers with years of experience, this book offers those working at the front line with an accessible resource that helps ameliorate problem situations and prevent others from developing.

Provides guidance to municipalities for investigating non-stormwater entries into storm drainage systems. These entries may originate from many diverse sources including sanitary wastewaters from leaky or directly connected sanitary sewerage and from poorly operating septic tank systems, washwaters for laundries and vehicle service facilities, and many types of industrial wastewaters that are discharged to drains leading to storm drainage or from direct industrial wastewater connections to the storm drainage system. 28 charts, tables and graphs.

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.

River Management

Preventing Animal–Aircraft Collisions Through Science-Based Management

The Australasian Experience

The National Estuary Program

A Toolbox for Watershed Managers, Scientists, and Engineers

Diffuse Pollution

Understanding how to properly manage urban stormwater is a critical concern to civil and environmental engineers the world over. Mismanagement of stormwater and urban runoff results in flooding, erosion, and water quality problems. In an effort to develop better management techniques, engineers have come to rely on computer simulation and advanced mathematical modeling techniques to help plan and predict water system performance. This important book outlines a new method that uses probability tools to model how stormwater behaves and interacts in a combined- or single-system municipal water system. Complete with sample problems and case studies illustrating how concepts really work, the book presents a cost-effective, easy-to-master approach to analytical modeling of stormwater management systems.

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Diffuse (non-point source) pollution is increasingly being recognised as a major source of water quality problems in both surface and ground water. Indeed, as pollution resulting from point sources is reduced by the efforts of regulators, diffuse sources frequently remain as the dominant source of pollution. The book is an introductory text covering the nature, causes and the significance of diffuse pollution of both urban and rural origin. Best management practices to tackle the problems are examined as are the ways in which the adoption of such practices may be brought about. Use is made of case studies from several countries to examine the strengths and weaknesses of various approaches. Diffuse Pollution covers both urban and rural sources. Urban sources include run-off from impermeable surfaces of roads, industrial areas and housing which may be contaminated by hydrocarbons, heavy metals, organic chemicals and other undesirable substances. Rural sources include water containing pollutants arising from agriculture and forestry such as plant nutrients, pesticides, microbes and soil itself. This concise book will prove useful to practitioners in the field of pollution control both in an urban and a rural environment, to regulators, to researchers new to the field, and to academics and students. An extensive reference section aids the reader in exploring the subject further. Contents

Diffuse pollution A Best Practice Approach An Introduction to BMPs for built environments Managing diffuse pollution from urban sources - a survey of best practice experience Rural BMPs Rural best practice experience Regulation, Economic instruments, and Education for controlling diffuse pollution Sustainability Full Contents List (439KB)

Wildlife in Airport Environments

Seattle Monorail Project

Stormwater NPDES Related Monitoring Needs