1.	Record Nr.	UNINA9910815739503321
	Autore	Seneviratne Mohan
	Titolo	A practical approach to water conservation for commercial and industrial facilities / / Mohan Seneviratne
	Pubbl/distr/stampa	Amsterdam ; ; Boston, : Elsevier/Butterworth-Heinemann, 2007
	ISBN	1-281-02393-0 9786611023935 0-08-052506-7
	Edizione	[1st ed.]
	Descrizione fisica	1 online resource (401 p.)
	Disciplina	333.912316
	Soggetti	Water conservation Industrial water supply
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Note generali	Description based upon print version of record.
	Nota di bibliografia	Includes bibliographical references and index.
	Nota di contenuto	Cover; Copyright Page; Table of Contents; Foreword; About the Author; Acknowledgement; Chapter 1 Water Conservation - A Priority for Business; 1.1 Introduction; 1.2 Global Water Resources Availability; 1.3 Human Need for Safe Drinking Water and Proper Sanitation; 1.4 Meeting Agricultural Needs; 1.5 The Impact of Climate Change; 1.6 Business Sector Water Usage; 1.7 Nine Reasons for Business to Reduce Their Water Consumption; 1.8 Conclusion; References; Chapter 2 Basic Water Chemistry; 2.1 Overview; 2.2 Solubility Principles; 2.3 Common Substances Found in Water; 2.3.1 pH; 2.3.2 Dissolved Gases 2.3.2.1 Carbon dioxide and Alkalinity2.3.2.2 Oxygen (O2); 2.3.2.3 Ammonia (NH3); 2.3.2.4 Hydrogen Sulphide (H2S); 2.3.3 Dissolved Ions; 2.3.3.1 Conductivity and Total Dissolved Solids; 2.3.3.2 Hardness, Calcium and Magnesium; 2.3.3.3 Chlorides; 2.3.3.4 Sodium; 2.3.3.5 Iron; 2.3.3.6 Manganese; 2.3.3.7 Silica; 2.3.38 Phosphate; 2.3.3.9 Nitrate; 2.3.3.10 Boron; 2.3.3.11 Cyanide; 2.3.4 Suspended Solids and Turbidity; 2.3.5 Colour; 2.3.6 Organics in Water; 2.3.6.1 Biochemical Oxygen Demand; 2.3.6.2 Chemical Oxygen Demand; 2.3.7 Micro- organisms; 2.3.7.1 Viruses; 2.3.7.2 Bacteria; 2.3.7.3 Protozoa 2.3.7.4 Algae2.3.7.5 Helminths; 2.3.7.6 Fungi; 2.3.8 Heavy Metals; 2.3.8.1 Chromium; 2.3.8.2 Cadmium; 2.3.8.3 Lead; 2.3.8.4 Mercury; 2.3.9 Radionuclides; References; Chapter 3 Saving Water: Step by Step;

	 3.1 Developing a Sustainable Water Management Plan; 3.2 Step 1: Seek Senior Management Commitment; 3.3 Step 2: Appoint A Water Conservation Manager; 3.3.1 Responsibilities of the Water Conservation Manager; 3.4 Step 3: Gather Baseline Data and Review Usage; 3.5 Step 4: Identify Improvement Opportunities; 3.5.1 Carry Out an Assessment of Management Systems 3.5.1.1 One-2-Five Water® - Management Diagnostic System3.5.2 Technical Assessment; 3.5.2.1 How Detailed Should the Water Audit Be?; 3.5.2.2 Estimating Water-Saving Potential; 3.5.2.3 Complying with Regulatory Standards; 3.5.2.4 Carrying out a Water Audit; 3.5.2.5 Develop a Water Balance; 3.5.2.6 Identifying Other Opportunities to Reduce Water Use; 3.6 Step 5: Preparing the Plan Prioritising the Opportunities; 3.7 Step 6: Report the Results; 3.8 Conclusion; References; Chapter 4 Measuring Flow and Consumption; 4.1 Flow Measurement; 4.2 Types of FlowMeters 4.2.1 Positive Displacement Meters (volumetric)4.2.2 Velocity Meters; 4.2.2.1 Mechanical Meters; 4.2.2.2 Non-Mechanical Meters; 4.3 Selecting a Flowmeter; 4.4 Dataloggers; 4.5 Chemical Methods of Flow Measurement; 4.6 Conclusion; Chapter 5 Cooling Water Systems; 5.1 Introduction; 5.2 Types of Cooling Systems; 5.2.1 Open Recirculating Cooling Water Systems; 5.2.1.1 Recirculating Cooling Water Systems - Operational Principles; 5.2.1.2 Recirculating Cooling Water Systems - Basic Concepts; 5.3 Types of Cooling Towers; 5.3.1 Induced Draught Cross-flow Cooling Towers
Sommario/riassunto	Industry and commerce use vast amounts of water and in some parts of the world water is becoming a scarce commodity. We need to take more care in our future use of water, and this book is a 'best practice' manual for industrial and commercial users world-wide. It offers a practical account of the measures which can be taken to re-educate industrial and commercial users in the techniques of water saving and re-use anywhere in the world. The principles are covered in detail and supported by examples from specific industries and commercial operations. Author Mohan Seneviratne is Manager of Sydney