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Nota di contenuto	Cover; Title Page; Contents; Preface; Chapter 1 Potential Contamination Agents of Interest; 1.1 Introduction; 1.2 Water System Vulnerability; 1.2.1 Physical Disruption; 1.2.2 Contamination; 1.3 Microbial Threats; 1.3.1 Biological Agents; 1.4 Chemical Agents; 1.4.1 Chemical Categories; 1.5 Chemical or Biological Release Examples; 1.6 Public Health Impacts; 1.7 Summary and Conclusions; References; Chapter 2 Surveillance Methods and Technologies for Water and Wastewater Systems; 2.1 Introduction; 2.2 Monitoring Routine Chemical Indicators of Contamination; 2.2.1 On-line Chlorine Measurement; 2.2.2 General Organic Chemical Load; 2.2.3 Oil and Petroleum Detection; 2.2.4 On-line Analytical Probes and Multiparameter Panels; 2.2.5 Multiarray Sensors; 2.3 Real-Time Toxicity Biomonitoring; 2.3.1 Bacteria-Based Toxicity Sensors; 2.3.2 Daphnia Toximeters; 2.3.3 Mussel Monitors; 2.3.4 Algae Toximeters; 2.3.5 Fish; 2.4 Monitoring for Radiation to Detect Radionuclides; 2.5 Screening for Specific Chemical Contaminants; 2.6 Screening for Specific Pathogens; 2.7 Pathogen Detection Systems Currently Under Development; 2.8 Conclusions; References Chapter 3 Designing an Optimal Water Monitoring Systems; 3.1 Introduction; 3.2 Role of Monitoring in Water Security; 3.3 Contamination Warning System; 3.4 Ideal Contamination Warning Technology; 3.5 Multiobjective Monitoring Programs; 3.6 Review of Monitoring Methods; 3.7 Optimal Monitoring Locations; 3.8 Case Study;

3.9 Summary and Conclusions; Acknowledgments; References; Further Reading; Chapter 4 Emergency Response Planning for Drinking Water Systems; 4.1 Introduction; 4.1.1 Return on Investment for a Utility Preparedness Program; 4.2 Legislation and Directives  
4.3 Emergency Response Planning Within the Business Continuity Planning Umbrella  
4.4 Phases of Emergency Management; 4.4.1 Assessment; 4.4.2 Mitigation; 4.4.3 Preparation; 4.4.4 Response; 4.5 National Incident Management System (NIMS) and Incident Command System (ICS); 4.5.1 Incident Command System; 4.5.2 National Incident Management System; 4.5.3 NIMS Compliance; 4.5.4 NIMS Training; 4.5.5 NIMS/ICS Training for Utility Personnel; 4.6 Promoting Resource and Information Exchange Among Stakeholders; 4.6.1 WARN; 4.6.2 Emergency Exercises; 4.7 How to Develop an Emergency Plan  
4.7.1 Types of Threats  
4.7.2 Plan Approval; 4.8 Contents of an Emergency Plan; 4.9 Considerations for Emergency Response Plan Content; 4.9.1 Mutual Aid Agreements; 4.9.2 Intertie Connections and Agreements with Other Systems; 4.9.3 System Information; 4.9.4 Response Actions for Specific Events; 4.9.5 Roles and Responsibilities; 4.9.6 Succession Planning; 4.10 Communications; 4.10.1 Emergency Notification of Personnel; 4.10.2 Internal Communication; 4.10.3 External Communication; 4.10.4 Communication with the Public; 4.10.5 Communication with Critical Customers; 4.11 Personnel Safety  
4.11.1 Emergency Equipment

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Sommario/riassunto

Water Safety and Water Infrastructure Security features articles from the Wiley Handbook of Science and Technology for Homeland Security covering topics related to contamination of drinking water, prevention, monitoring, and decontamination. Emergency response planning for drinking water and wastewater systems are also discussed.

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