

1. Record Nr.	UNINA9910555259403321
Autore	Prochaska Charles
Titolo	Introduction to mathematical methods for environmental engineers and scientists // By Charles Prochaska and Louis Theodore
Pubbl/distr/stampa	Hoboken, NJ : , : John Wiley & Sons Beverly, MA : , : Scrivener Publishing, , 2018
ISBN	1-119-36414-0 1-119-36418-3 1-119-36415-9
Descrizione fisica	1 online resource (501 pages)
Disciplina	510
Soggetti	Environmental engineering - Mathematical models Environmental sciences - Mathematical models
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	Fundamentals and principles of numbers -- Series analysis -- Graphical analysis -- Flow diagrams -- Dimensional analysis -- Economics -- Problem solving -- Analytical geometry -- Differentiation -- Integration -- Differential calculus -- Integral calculus -- Matrix algebra -- Laplace transforms -- Trial-and-error solutions -- Nonlinear algebraic equations -- Simultaneous linear algebraic equations -- Differentiation -- Integration -- Ordinary differential equations -- Partial differential equations -- Basic probability concepts -- Estimation of mean and variance -- Discrete probability distribution -- Continuous probability distribution -- Fault tree and event tree analysis -- Monte carlo simulation -- Regression analysis -- Introduction to optimization -- Perturbation techniques -- Search methods -- Graphical analysis -- Analytical analysis -- Introduction to linear programming -- Linear programming applications.

2. Record Nr.	UNINA9910644267903321
Autore	Du Plessis Anja
Titolo	South Africa's Water Predicament : Freshwater's Unceasing Decline // by Anja du Plessis
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2023
ISBN	9783031240195 9783031240188
Edizione	[1st ed. 2023.]
Descrizione fisica	1 online resource (189 pages)
Collana	Water Science and Technology Library, , 1872-4663 ; ; 101
Disciplina	910.5
Soggetti	Water Hydrology Sustainability Pollution Ecology Environmental policy Environmental Sciences Environmental Policy
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Introduction -- 1: Water Resources from a Global Perspective -- 2: Necessity of IWRM and Water Services -- 3: South Africa's Continued Freshwater Decline and Current State -- 4: Decline in Informed Water Management -- 5: Continued Lack of Water Service Delivery -- 6: Progressive Deterioration of Water Quality -- 7: Main Issues Requiring Attention and Addressing Continued Deterioration -- 8: Transforming the Predicament into Problems.
Sommario/riassunto	The book provides a critical evaluation of South Africa's freshwater resources to illustrate the way in which its freshwater resources, water access, services and infrastructure have continued to decline over the past three decades. The continued decline of water governance, management, water service delivery, dilapidated water infrastructure, dysfunctional local governments and overall excessive water degradation is illustrated and emphasized using real-life examples and

case studies from various contexts within the country. The main argument of the book is that South Africa's freshwater resources have declined to such an extent that it can be described as a predicament. Questionable water governance decisions and reactive water management practices have led to no improvement and/or increased degradation of freshwater resources. An overall lack of service delivery exists across the country, in various contexts, leading to further water and social decline. An inter-disciplinary evaluation of South Africa's current water predicament is provided, major water crises are prioritized, and suitable recommendations are given to transform its predicament into problems which can be addressed. Suitable background information is given to emphasize the necessity of good water governance, management, and service delivery. South Africa's freshwater resources are evaluated with specific focus on the decline of informed water governance, management, service delivery and water quality. Factors requiring urgent attention are determined and suitable recommendations and/or actions are provided. An evaluation and overall synthesis focused on the transformation of the predicament into problems is provided. Primary water problems are prioritized according to urgency and suitable recommendations are given to assist in transforming the country's current complex water predicament into "simpler" water problems. Political will, collaboration with researchers, stakeholders, non-governmental organizations, and cooperation of civil society is required. South Africa's already scarce freshwater resources and decaying infrastructure will persist and possibly collapse if no major actions or interventions are implemented. .
