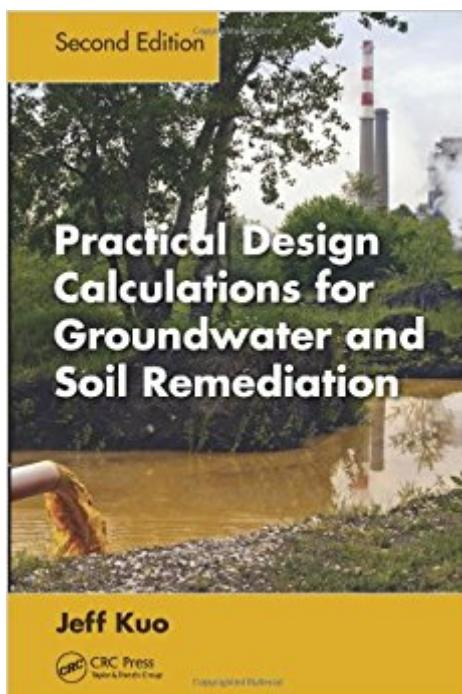


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# Practical Design Calculations For Groundwater And Soil Remediation, Second Edition



## Synopsis

Includes Illustrative Applications of Practical Design Calculations Written in a straightforward style and user-friendly format, Practical Design Calculations for Groundwater and Soil Remediation, Second Edition highlights the essential concepts and important aspects of major design calculations used in soil and groundwater remediation. Drawing from the author's teaching and consulting experience, this text provides practical information that addresses the current needs of practicing engineers, scientists, and legal experts in the field. What's New in This Edition: This latest edition covers important aspects of major design calculations as well as practical and relevant working information for groundwater and soil remediation. Realistic examples are used liberally to illustrate the applications of the design calculations. Many examples are designed to assist the readers in building the right concepts. The text begins with an introductory chapter; it then illustrates the engineering calculations needed during site assessment and remedial investigation. It continues with a discussion on plume migration in soil and groundwater. It then covers the mass-balance concept, reaction kinetics, and types, configurations, and sizing of reactors. The author incorporates important design calculations for commonly used in situ and ex situ soil and groundwater remediation technologies, such as soil venting, air sparging, air stripping, bioremediation, and chemical oxidation, and off-gas treatment technologies. He also presents design calculations for capture zone and optimal well spacing. Includes both SI and US customary units, as well as unit conversions. Presents examples that directly follow the design equations. Provides discussion that assists engineers in building proper concepts. Practical Design Calculations for Groundwater and Soil Remediation, Second Edition also serves as a reference or textbook for students dedicated to the study of site remediation.

## Book Information

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## Customer Reviews

"This latest edition of Kuoâ™s book covers important aspects of major design calculations as well as providing practical and relevant working information for groundwater and soil remediation. Realistic examples are used liberally to illustrate the applications of the design calculationsâ | a comprehensive methodological and practical manual, suitable for specialists trained in a variety of technical and educational backgrounds, for the solution of very complicated groundwater and soil remediation requiring a multidisciplinary approach. â |provides practical information that addresses the current needs of practising engineers, scientists and legal experts who are employed by industry, consulting companies, law firms and regulatory agencies in the field of soil and groundwater remediation."â •Quarterly Journal of Engineering Geology and Hydrogeology, 2015

Jeff (Jih-Fen) Kuo, PhD, PE worked in the environmental engineering industry for more than ten years before joining the Department of Civil and Environmental Engineering at California State University, Fullerton in 1995. His industrial experience in environmental engineering includes design and installation of air strippers, activated-carbon adsorbers, soil vapor extraction systems, bioremediation systems, and flare/catalytic incinerators for groundwater and soil remediation. Dr. Kuo earned a BS degree in chemical engineering from National Taiwan University, an MS in chemical engineering from the University of Wyoming, an MS in petroleum engineering, and an MS and a PhD in environmental engineering from the University of Southern California. He is a registered civil, chemical, and mechanical engineer in California.

I bought this for my Environmental PE exam prep and it was extremely useful, actually, to learn air pollution concepts as well as the expected ground contamination concepts. Lots of great study material packed in here, but I give it only four stars because it's regular book paper and typography. It's like a regular fiction book but it has numbers - it doesn't look like the standard graphically manipulated text book and a vast majority of the equations are written in line (typed normally) rather than designed and formulated like you actually write them yourself. These things make this book hard to follow until you have a much stronger grasp on the topics - but it's still full of great info.

Everything in this book was in one of my other basic references so it's not different, but while studying it helped me to read and learn the same concept from multiple sources and Kuo's book always brought a much more insight and practical use to the concepts.

Glad we now have the 2nd edition- easy to justify this for the expense report. I went through and found some good updates from the 1st edition. If you need a good desktop reference for remediation design, this book is a solid fit. I appreciate the rare blend of practicality and clear objectivity.

This is a unique book that every groundwater remediation design person should own. It's the one I highly recommend to our students in the Princeton Remediation Course as essential to their professional work. There are hundreds of detailed calculations covering the widest possible range of useful applications in groundwater remediation. The number of calculations provided in other books on remediation pale by comparison to those presented in Kuo's book.

This book is absolutely awesome! I teach this stuff and finding calculation examples for a wide variety of environmental applications is priceless!

I just read, after one hour, through chapter 2 and 3 (chapter 1 is just a very short, 3 pages introduction), which are what I know most (I am a geologist and hydrogeologist). I agree that this book is worth reading for the practical insight and knowledge gathered during long years of field experience. I simply add some suggestions for the next edition. First of all, add a page with a list of acronyms and abbreviations and their meaning. Secondly provide a page for USA and SI Units transformations (the book is strongly USA oriented). Thirdly write the formulas in bold and use more text font tricks to improve the readability. Forth, add more pictures and sketches (e.g. to show the parts of a well, a pumping test set up, etc.). This said, it is clear that this book is not for novices. For instance it is assumed that the theoretical background of pumping tests is known. It is very good as a companion book. I certainly recommend this book and I would give 5 stars if the minor flaws that I pointed out were addressed to. Errata: page 17, top "the average specific density of soil...2 and not "the average specific gravity..."

Great reference. Dr. Kuo is great at presenting his material in a straightforward and practical way; his presentation of calculations is clear and concise, with U.S. customary units in mind. This

practical focus keeps the material from becoming muddled in unit conversions, which often happens in other references.

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