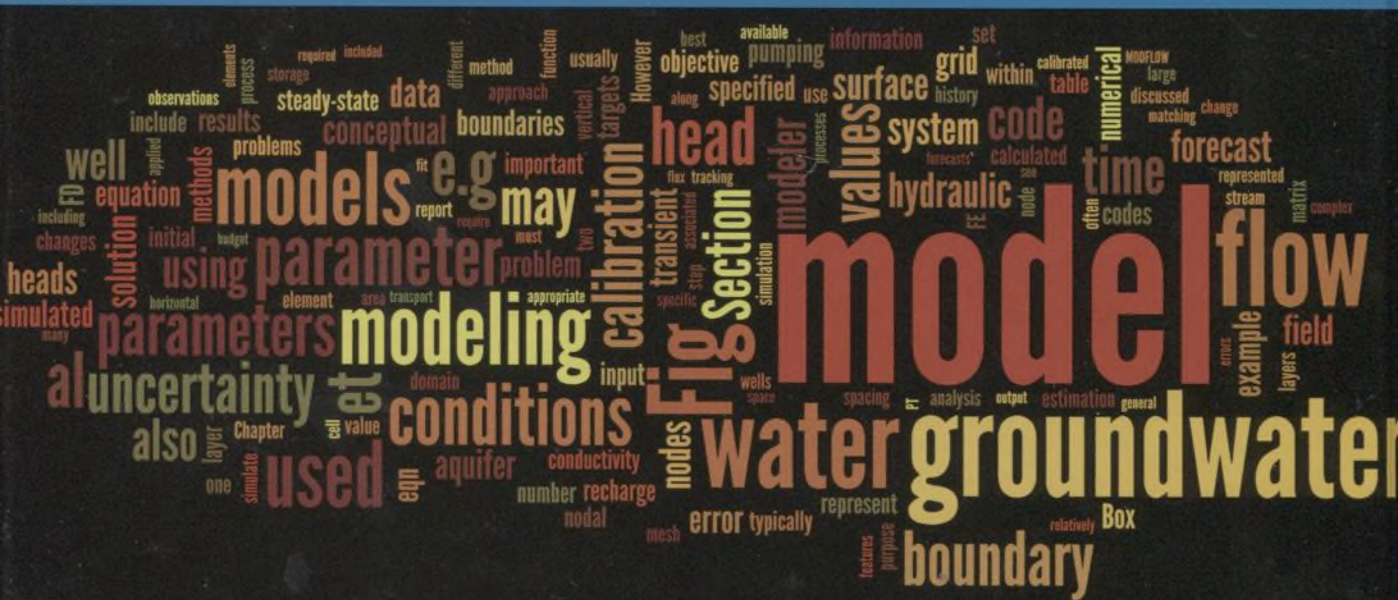
This second edition is extensively revised throughout with expanded discussion of modeling fundamentals and coverage of advances in model calibration and uncertainty analysis that are revolutionizing the science of groundwater modeling. The text is intended for undergraduate- and graduate-level courses in applied groundwater modeling and as a comprehensive reference for environmental consultants and scientists/engineers in industry and governmental agencies.

Key features:

- Explains how to formulate a conceptual model of a groundwater system and translate it into a numerical model
- Demonstrates how modeling concepts, including boundary conditions, are implemented in two groundwater flow codes—MODFLOW (for finite differences) and FEFLOW (for finite elements)
- Discusses particle tracking methods and codes for flowpath analysis and advective transport of contaminants
- Summarizes parameter estimation and uncertainty analysis approaches using the code PES to illustrate how concepts are implemented
- Discusses modeling ethics and preparation of the modeling report
- Includes boxes that amplify and supplement topics covered in the text
- Each chapter presents lists of common modeling errors and problem sets that illustrate concepts



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