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Apparent Age; 1.6.5 Storage Time, Mean Transit Time, Turnover Time, Flushing Time, and Travel Time
1.6.6 Reservoir Theory and Its Relation with Groundwater Residence Time2 History of Groundwater Age-Dating Research; 2.1 Pioneer of Groundwater Age Discipline-Sequence of the Earliest Publications; 2.2 Laboratories Worldwide for Dating Groundwater Samples; 2.3 Major Contributors to Groundwater Age-Dating Discipline; 2.4 Names Familiar in the Groundwater Dating Business; 2.5 Important Publications; 2.5.1 Book Chapters; 2.5.2 Ph.D. and M.Sc. Theses; 2.5.3 Journals; 2.5.4 Reports (mainly by the USGS); 2.6 Aquifers Subjected to Extensive Dating Studies; 3 The Applications of Groundwater Age Data 3.1 Renewability of the Groundwater Reservoirs3.2 An Effective Communication Tool for Scientists and Managers-and Curiosity to Laymen as Well; 3.3 Age Monitoring for the Prevention of Overexploitation and Contamination of Aquifers; 3.4 Estimation of the Recharge Rate; 3.5 Calculation of the Groundwater Flow Velocity; 3.6 Identification of the Groundwater Flow Paths; 3.7 Assessing the Rates of Groundwater and Contaminants Transport Through Aquitards; 3.8 Constraining the Parameters of Groundwater Flow and Transport Models (Estimation of Large-Scale Flow and Transport Properties)
3.9 Identification of the Mixing Between Different End Members3.10 Study of the Pre-Holocene (Late Pleistocene) Climate; 3.11 Evaluation of the Groundwater Pollution; 3.12 Calculation of the Travel Time of the Groundwater Plume to the Points of Interest; 3.13 Mapping Vulnerability of the Shallow Aquifers; 3.14 Performance Assessments for Radioactive Waste Disposal Facilities; 3.15 Site-Specific Applications; 3.15.1 Identification of the Seawater-Level Fluctuations; 3.15.2 Calculating the Timescale of Seawater Intrusion; 3.15.3 Disposal of Wastes into the Deep Old Saline Groundwater Systems
3.15.4 Management of the Dryland Salinity in Australia

Sommario/riassunto

Groundwater Age is the first book of its kind that incorporates and synthesizes the state-of-the-art knowledge about the business of groundwater dating - including historical development, principles, applications, various methods, and likely future progress in the concept. It is a well-organized, advanced, clearly written resource for all the professionals, scientists, graduate students, consultants, and water sector managers who deal with groundwater and who seek a comprehensive treatment of the subject of groundwater age.