As an example, the following information is given for the USA: regional annual runoff; monthly discharge of principal rivers; maximum and minimum daily flow of selected rivers; large rivers, ranked in order of discharge at the mouth; hydrologic cycle and water use; water resources regions; available water resources, withdrawal and consumption; trends in water use, 1950–70; projected water use, 1980–2020; water used for public supplies by states; water for rural use by states; water used for irrigation by states; self-supplied industrial use; water used for thermoelectric power generation; water used for hydroelectric power; natural fresh water lakes; principal saline lakes; major reservoirs; municipal water supply systems; land area, population, and economy by states; water use data for representative states; and other miscellaneous statistics.

Similar data are given for other countries, as available, and for the world as a whole. As noted by the editor, information on streamflow on a worldwide basis proved to be fairly complete, but data on the use of water resources were found to be quite inadequate. However, the data presented should prove very useful for those interested in the world water picture now and in the future. —DANIEL E. EVANS, Department of Hydrology & Water Resources, University of Arizona, Tucson.

Forest Soils and Forest Land Management.


This book is the proceedings of the Fourth North American Forest Soils Conference, held at Laval University, Quebec, August 1973.

The purposes of the North American Forest Soils Conferences are to provide a forum for evaluation and exchange of research results among soil-related scientific disciplines, and to facilitate communication between the research and application phases of forest soil science. The conferences are sponsored by the Canadian Institute of Forestry, Canadian Soil Science Society, Society of American Foresters, and the Soil Science Society of America.

This book, together with the proceedings of the earlier conferences, traces the development of forest soil science in the United States and Canada over the last two decades. Soil-site and land evaluation studies predominated in the first two conferences and forest fertilization received major emphasis for the first time at the third conference. These topics are again well represented at the fourth conference, which also considers in detail the environmental impact of forest management practices.

Forest Soils and Forest Land Management contains 42 papers arranged under six broad topics: Soil Physics, Biology, and Biochemistry; Nutrient Cycling and Soil Productivity; Land Management and Forest Use; Quality of the Environment; Intensive Site Preparation; Forest Land Use; Classification; Soil and Site in Forest Management Decisions; and Information Requirements of Forest Land Managers. The papers are about equally divided between original research and review or application articles.

The impact on water quality of forest management practices, including timber harvest, mechanical and chemical site preparation, and fertilization, is the subject of eight papers. Several papers discuss impact of forest management practices on soils and wildlife. Increasing tree growth through fertilization is the topic of five papers, and another discusses forest fertilization for nonwood production. The importance of nitrogen in forest land management is emphasized by the large number and variety of papers concerned with this element. Nitrogen is the key element in two review articles and in several papers dealing with forest fertilization, nutrient cycling, and water quality.

This conference placed more emphasis on land use planning and the soils information needs of the land manager than the first three. Eleven papers deal with these topics and should be helpful in bridging information gaps between soil scientists and foresters, and between researchers and land managers. The book ends with a thought-provoking exploration of the moral responsibilities of the forest land manager to society.

The quality of editing and printing of Forest Soils and Forest Land Management is excellent, and the book is full of stimulating articles. Those interested in forest soil science from either the research or management aspects will want to read this book. —DAVID H. ALBAN, Research Soil Scientist, USDA Forest Service, Grand Rapids, Minn.