Preface

Five powerful rivers, the Yukon, Columbia, Snake, Colorado and Rio Grande, drain western North America. Their shifting paths have shaped and reshaped the landscapes through which they flow and the confluences where their sediment-laden water co-mingle with tributary waters on the voyage to the Pacific Ocean. Changing climates and extreme weather events over the millennia have carved new channels through river bottomlands, leaving rock-exposed uplands and fertile valleys behind while altering the location of these Great Rivers. Since great rivers often become state boundaries, their historic realignment has added or subtracted land from many states that border them. For much of their history, the lands adjacent to these rivers were low-lying bottomlands that flood with the seasons, unconstrained by human structures. However, in the last century, many of these rivers have become agricultural economic engines as humans reengineered the rivers and their bottomlands with extensive systems of levees, locks and dams, floodwalls, and reservoirs. Through a series of engaging case studies accompanied by illustrative maps and photographs, the author examines the complex and ever-changing Yukon, Columbia, Snake, Colorado and Rio Grande River landscapes and their systems; review historical impacts of climate, economic and population growth, and efforts to manage river landscapes with engineered structures; and make recommendations on future management to protect soil and water resources and facilitate social, economic, and ecosystem balance. Kenneth R. Olson, *Ph.D., Emeritus Professor of Soil Science, NRES, ACES, University of Illinois, Champaign-Urbana, Illinois, USA.*