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1917–1990

By Robert L. Smith

Ray K. Linsley, internationally known hydrologist and water resources engineer, died November 6, 1990, at the age of seventy-three. Professor Linsley was born January 13, 1917, in Hartford, Connecticut. He was educated at Worcester Polytechnic Institute and graduated with a B.S. in civil engineering. He retired from a distinguished career at Stanford University in 1975. At the time of his death he was president of Linsley, Kraeger Associates Ltd., Santa Cruz, California.

Ray was elected to membership in the National Academy of Engineering in recognition of his worldwide leadership in the field of engineering hydrology. He was a dedicated professional with a legendary reputation for contributing his time and efforts to improving the quality of engineering practice.

After several years as a young engineer with the Tennessee Valley Authority, Linsley spent a decade pursuing hydrologic tasks with the U.S. Weather Bureau. It was during this period, in 1949, that his first book, jointly authored with colleagues M. A. Kohler and J. L. H. Paulhus, appeared. At the close of his tenure with the Weather Bureau, he was serving as assistant chief, Division of Climatological and Hydrologic Services, in charge of hydrologic activities, including river forecasting, data collection, and hydrometeorological studies. He left the Bureau in 1950 to begin an illustrious twenty-five-year career at Stanford University.

During his tenure at Stanford, he fulfilled some very signifi

cant administrative roles in addition to his primary teaching and research efforts. He was head of the Department of Civil Engineering from 1956 to 1967 and associate dean from 1966 to 1968. In addition he was cofounder and director of the Program in Engineering-Economic Planning from 1962 to 1971. He was also a productive author during this period. *Elements of Hydraulic Engineering*, coauthored with Professor J. Franzini, appeared in 1955, to be followed in 1958 by *Hydrology for Engineers*, again with former colleagues Kohler and Paulhus. The latter publication, as well as the Linsley-Franzini effort recast in 1964 as *Water Resources Engineering*, enjoyed multiedition success. Suffice it to say, these textbooks have had an enormous educational influence in the fields of engineering hydrology and water resources engineering, both in this country and throughout the world.

Four salient points should be noted relative to Linsley's academic career. First, as previously indicated, he was the senior author of the most widely used textbooks in his field. Second, he pursued an extensive research effort that produced an outstanding group of doctoral graduates, many of whom are currently recognized as emerging leaders in the field. Third, his research program pioneered the development of digital simulation models in engineering hydrology—models now commonly used in hydropower, flood control, water supply, and water quality studies. Fourth, in cooperation with others at Stanford he pioneered the development of a program in engineering-economic planning. This was an effort to improve the profession by stressing the planning process as distinct from design. It sought to prepare engineers to undertake the planning process with direct regard for social, political, environmental, and economic considerations in addition to the technical engineering aspects. Few, if any, can match this diversity of distinguished academic success.

Ray's educational efforts extended far beyond this nation. Early on he served as Fulbright Professor of Hydrology at the Imperial College of Science and Technology in London. Less formal efforts took him to Japan and Australia. His most unique and extensive contribution to international education came during the period 1966–1981 when he served as academic

director of the graduate course in water resources at the University of the Andes in Venezuela. In this program he directed efforts to educate engineers from all over Latin America. Sponsored by the Venezuelan Ministry of Public Works, the program awarded an M.S. after three consecutive summers of study.

Linsley's career also included significant elements of public practice and service. In 1964–1965 he was chairman of the Committee on Water Resources Research (COWRR) of the Federal Council for Science and Technology and a special assistant for water resources in the Office of Science and Technology (OST). At OST he was responsible for handling specific problems of national water resources policy as requested by the White House. As chairman of COWRR he was directly responsible for the coordination of federal water resources research scattered throughout more than twenty federal agencies. In 1968 President Johnson appointed Linsley a member of the National Water Commission. The commission's task was to undertake a multiyear, multimillion-dollar study of U.S. water policy and to report back to the President and Congress. The resulting report, even today, remains one of the most objective examinations of water policy ever undertaken. Over the years he was also a member of several National Research Council committees.

Many have commented over the years on the pragmatic essence of his research and publications. This was undoubtedly a reflection of his long association with private-sector problems. He served for a number of years as vice-president of the consulting firm of Bradbury and Associates. Later he was a cofounder and initial chairman of Hydrocomp International, a hydrologic modeling firm in Palo Alto. Subsequently, he became president of Linsley, Kraeger Associates Ltd., the position he held at the time of his death. In his continuing efforts to improve both public-and private-sector practice, he became a prime mover in the formation of the American Institute of Hydrology. He later became the institute's honorary president, and an award was created in his name.

Ray's many efforts and accomplishments led to numerous awards from peers in this country and abroad. The American Society of Civil Engineers bestowed on him the Collingwood

Prize in 1942 and its Julian Hinds Award in 1978. Later in 1978 the society elevated him to the status of honorary member. He was the recipient of the American Water Resources Association's Icko Iben Award in 1974. His alma mater, Worcester Polytechnic Institute, and the College of the Pacific awarded him honorary doctoral degrees. Internationally, both the Venezuelan Society of Hydraulic Engineers and the Japan Society of Civil Engineers granted him honorary membership. There were many more.

Ray Linsley was a true giant of the profession. The citation upon his election to the National Academy of Engineering read, for "leadership in hydrology and water resources planning through distinguished teaching, research, professional practice and service to the government." It could not have been stated better.

