



IN MEMORIAM

Joseph William Johnson
Professor of Civil and Environmental Engineering, Emeritus
Berkeley
1908 — 2002

Joseph William Johnson was born on July 19, 1908, in Pittsburgh, Kansas, and died on April 11, 2002, in Victoria, British Columbia, Canada, at the age of 93. He was professor emeritus of hydraulic engineering, in the Department of Civil and Environmental Engineering at the University of California, Berkeley. He was a pioneer in the field of coastal engineering.

Joe, as he was always known, grew up in Winslow, Arizona, and Los Angeles, California. He received his bachelor's and master's degrees in civil engineering from UC Berkeley in 1931 and 1934, respectively. After graduating, he spent a year at the U.S. Army Corps of Engineers Waterways Experiment Station in Vicksburg, Mississippi. He then transferred to the Soil Conservation Service in Washington, D.C., where he worked on sediment transportation from 1935 until 1942.

While in Washington, D.C., Joe met and married Virginia Goodwin Burke, of Helena, Arkansas. They had two children, both born in Berkeley, Christina Betts (Tina) and Cornelia Burke (Nelia).

In July 1942, Joe was appointed an assistant professor in the Department of Mechanical Engineering at UC Berkeley, and he and Virginia moved to Berkeley. He immediately became involved in the intensive study of waves and beaches that was being undertaken for the U.S. Navy as part of a major effort in amphibious operations during World War II. It was a joint effort conducted for the Bureau of Ships by the Department of Engineering at UC Berkeley, under the direction of Morrough P. O'Brien, and at the Scripps Institution of Oceanography under the direction of Harald U. Sverdrup. Some of Joe's colleagues in this war work were Willard N. Bascom, Richard G. Folsom, John D. Isaacs, and John A. Putnam. A broad description of the project was published in the article, "Wartime Research on Waves and Surf," by M. P. O'Brien and J. W. Johnson in *The Military Engineer* 39: 260 (June 1947). Joe continued his research, teaching, and consulting, becoming a pioneer in the newly developing field of coastal engineering, attracting graduate students and visiting scholars from around the world. These included Charles L. Bretschneider, Per Bruun, Richard C. Crooke, Robert A. Fuchs, Kiyoshi Horikawa, Richard C. McCamy, Jack R. Morison, Egbert Prins, Thorndike Saville Jr., Frank E. Snodgrass, and Robert L. Wiegel.

In 1946, Joe was promoted to associate professor in the Department of Mechanical Engineering, and in 1952 he was appointed professor of hydraulics in the Department of Civil Engineering, where he remained until his retirement in 1975. His colleagues during this time included Morrough P. O'Brien, Hans A. Einstein, Gerald J. Giefer, Percy H. McGauhey, David K. Todd, Parker D. Trask, and Robert L. Wiegel.

Joe received a Guggenheim Fellowship (1955-56) to study sedimentary processes at river mouths, harbor entrances, and adjacent beaches. This work resulted in two landmark papers, "Littoral Drift Problem at Shoreline Harbors," *Trans. ASCE* 124 (1958): 525-546, and "The Supply and Loss of Sand to the Coast," *Jour. Waterways and Harbors Division, Proc. ASCE* 85:WW3 (Sept. 1959).

Joe taught both undergraduate and graduate courses in hydraulics and coastal engineering, and he supervised a large number of Ph.D. students. He also believed in the value of continuing professional education and

lectured in short courses in coastal engineering given by the University of California Extension and at other universities. His research in coastal engineering was prolific, with more than 100 published papers and technical reports.

Joe was a friendly person, well liked and respected by all of his colleagues and students. He was well organized, and had a remarkable memory. His notable administrative talents were recognized by the University. He was active in teaching, research and administration, serving as director of the Hydraulic Engineering Laboratory from 1959 until 1968, chair of the Division of Hydraulic and Sanitary Engineering from 1963 until 1967 (and acting chair, 1971-72), and archivist of the Water Resources Center Archives from 1963 until 1973. As an administrator, Joe is particularly remembered for his interest in the careers of his junior colleagues. He was both mentor and friend, always accessible, and generous in his advice and encouragement.

Perhaps Joe was best known, outside of his teaching, research, consulting, and government service, for organizing what became known as the International Conferences on Coastal Engineering (ICCE). The first conference was a specialty conference organized by the University of California's Extension Division, and held in Long Beach, California, in 1950. Then, first as secretary of the Council on Wave Research of The Engineering Foundation (1950-64), and later as secretary of the American Society of Civil Engineers (ASCE) Coastal Engineering Research Council (1964-78), Joe organized 16 conferences, and was editor of the proceedings published by the ASCE. In 1974, he became editor of the journal, *Shore & Beach*, and served in this capacity until his "retirement" at the age of 80 in July 1988.

Joe served as a consulting engineer on projects as varied as beach erosion in Venezuela; an ore port in Brazil; a harbor in Puerto Rico; port developments in Mexico, Australia, Egypt, and Peru; harbor sedimentation in Argentina; a port site study in Guatemala; sand dunes in Portugal; a breakwater in Guam; several projects in Canada; and beach and harbor studies in many parts of the coastal United States. Joe always had the ability to see through a complicated problem, isolating the fundamental parts of it and making a decision.

Joe's public service life was a full one. He was chairman of the U.S. Delegation to the U.S.- Japan Cooperative Seminar on Coastal Engineering held in Japan in 1964. He served as a member of the Shoreline Erosion Advisory Panel, U.S. Army Corps of Engineers (1974-80). He was vice president and director of the American Shore and Beach Preservation Association (1974-88). He served on many committees of the American Society of Civil Engineers, including the executive committee of the Waterways and Harbors Division (1957-62; chair, 1960). He was chair of the Pacific Southwest Regional Committee of the American Geophysical Union (1951-54), and chair of the American Geophysical Union regional meeting in 1955.

Joe received many honors for his leadership in coastal engineering. He was a member of the National Academy of Engineering, an honorary member of the American Society of Civil Engineers, an honorary member of the Japan Society of Civil Engineers, winner of the prestigious Berkeley Citation of the University of California, recipient of an Outstanding Civilian Service Medal from the U.S. Department of the Army, and recipient of the ASCE's International Coastal Engineering Award and the Moffatt- Nichol Harbor and Coastal Engineering Award. He was the first to receive the Morrrough P. O'Brien Award of the American Shore and Beach Preservation Association. The California Shore and Beach Preservation Association's major award is named in his honor.

Joe's major hobby was the history of hydraulics, especially hydraulic engineering in the "Gold Country" in California. He published several papers on his historical studies. Joe found the "hurdy- gurdy" wheel used at the Monarch Mine, Sierra City, Sierra County, California, and it is mounted over the entrance to the present Hydraulic Engineering Laboratory at UC Berkeley.

In August 1985, Joe's beloved wife Virginia died. Their two daughters and grandchildren lived in Victoria, B.C., Canada, and Joe moved to Victoria to be near them. A memorial service for Joe was held in Victoria on April 21, 2002, with family and many friends attending. At the same time a memorial luncheon was held in Berkeley, with his old friends reminiscing about him. Joe was cremated as he requested. His ashes will be distributed on the open Pacific Ocean in the waves and water he loved and studied.

Joe is survived by his two daughters, Christina Johnson- Dean and Nelia Johnson, both living in Victoria, B.C., Canada; his brother Robert L. Johnson, of Laguna Niguel, California; and six grandchildren.

Lawrence Talbot
Robert L. Wiegel