



Photograph by Fabian Bachrach.

*Richard Hazen*

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1911-1990

By Daniel A. Okun

RICHARD HAZEN, a consulting engineer involved in the planning and design of water supply and wastewater disposal projects in the United States and around the world, died on February 12, 1990, in Dobbs Ferry, New York, where he had been born.

A son of the distinguished consulting engineer Allen Hazen, a pioneer in the water field, Dick Hazen was cofounder of the New York City environmental engineering consulting firm Hazen and Sawyer in 1951. He had studied at Dartmouth College, where he earned a B.A. in history in 1932. Intending originally to go on to business school at Harvard, he wondered whether he should go into engineering. A Dartmouth trustee advised, "With your name, you surely should!" Dick graduated with a civil engineering degree from Columbia University in 1934 and then went to work for the West Virginia Pulp and Paper Co. He left after two years to study sanitary engineering at Harvard under Professor Gordon Fair, earning an M.S. degree in 1937.

Dick began his consulting career immediately upon leaving Harvard, going to work for Malcolm Pirnie, an engineer who had been with the Hazen and Whipple firm and taken over its responsibilities on Allen Hazen's death. With the onset of World War II, he joined the Civil Engineer Corps of the U.S. Navy, where he was involved in the construction of the Sampson Naval Training Station in New York State and then became responsible for the planning, operation, and maintenance of water-related

facilities at naval stations in the southeastern part of the United States. After the war, he rejoined Malcolm Pirnie as a partner. (The author of this memorial served as a neophyte consulting engineer under Richard Hazen at this time.)

In 1951 with another Pirnie engineer, Alfred W. Sawyer, the firm of Hazen and Sawyer was founded. It grew to be one of the most prestigious consulting firms in the United States in water-related consulting and engineering, with a staff of more than 160 in six offices when Dick formally retired in 1981. He remained active in "retirement," and ten years later Hazen and Sawyer had grown to some 500 staff members in twelve offices.

Known throughout the profession as an "engineer's engineer," Dick never gave up his commitment to engineering being involved in the technical aspects of every project with which he was associated. He studied the maps, made the calculations, wrote the reports (or reviewed the writings of others with a heavy hand), and trod the project sites in all kinds of weather to the end of his career. He never succumbed to being only a manager and never perceived his engineering firm to be a "business." He was opposed to competitive bidding for professional engineering services: "The quality of professional services is rarely amenable to specification or contract, especially in the planning and design of facilities; . . . the least expensive engineering often proves to be the most costly."

Dick Hazen's professional impact was widespread. Registered in seventeen states, he was personally responsible for major water supply and sewerage projects in Venezuela, Liberia, Saudi Arabia, Nicaragua, Brazil, Kuwait, Vietnam, and Ecuador. After initially being engaged as an engineer by a client, the quality of his work earned him repeated projects with the same client. An example was Greensboro, North Carolina, where he was first brought in to make a rate study and was thereafter retained to design three dams, two water treatment plants, and two wastewater treatment plants. His projects included a field study for filtration of water from the first major water system for the City of New York, the Croton, which Allen Hazen had recommended be done in 1900; design of the water supply and treatment system for the Detroit Metropolitan region; and water supplies or

wastewater treatment projects for Charleston, South Carolina; Washington, D.C.; Philadelphia; Springfield, Massachusetts; and Oneida County, New York, among others. He served as a principal witness for the Great Lakes states in the Chicago-Lake Michigan water diversion case and designed water-related facilities for industry throughout the United States, including those for the New York World's Fair in 1964-1965.

Dick Hazen used his "free" time for studying and writing. He toured Europe, as his father had done, and wrote of European practices for the benefit of American engineers. He wrote journal articles and chapters in handbooks and maintained an interest in the technical developments in his field.

Dick also served the profession directly. Elected to the National Academy of Engineering in 1974, he served the National Research Council from 1977 to 1980 and again in 1982-1984 as a member of the committee appointed to review the Corps of Engineers Metropolitan Washington Area Water Supply Study. The respect in which he was held in the profession is attested to by his election to the presidencies of the American Institute of Consulting Engineers and the Metropolitan (New York) Section of the American Society of Civil Engineers (ASCE), and to honorary membership in the ASCE and the American Water Works Association. He had also served as director and chairman of the Publications Committee of the American Water Works Association.

Education was always been important to Richard Hazen. He gave courses over a three-year period (1938-1940) at Columbia University and took a sabbatical from his office for one semester in 1968 to teach a special graduate course in water supply for engineers from throughout the world at the University of North Carolina at Chapel Hill. (While there, Chapel Hill suffered a severe water shortage, and the university, which then owned the water system, engaged Hazen and Sawyer to address the problem. The dam and Cane Creek reservoir, designed by Hazen and Sawyer, were placed in operation shortly before Dick's death.)

His interest in engineering education was profound but, unfortunately, ahead of his time. He believed strongly that engineers today cannot be expected to be educated in four years,

especially if they are to serve in helping make public policy with much better educated lawyers and planners. "The world has become so complex that much more is expected of the engineer," he wrote. "Engineers must play a larger role in society than previously and be familiar with a wide range of subjects and ideas. That cannot all be accomplished in four years." Liberal arts courses designed for engineers are not enough; much more important in their education is the association with students from other walks of life "even if they do not think like engineers." Engineers need to be educated as well as trained.

Dick appreciated that the quality of education, and the capacity to learn at the university and in life, is heavily dependent on the quality of the experience in grade school and high school. His six years on the Dobbs Ferry school board affected his approach to education generally and to children in particular, the latter leading him to become president of the school board of Children's Village, a home for emotionally disturbed boys in Dobbs Ferry.

Richard Hazen had been the husband of the late Elizabeth Shute; father of daughters Putnam Gorman and Molly Hazen Gillam and son, the late Richard (Chris) Hazen, Jr.; and grandfather of Mary Gorman, Timothy Gillam, Jonathan Gillam, and Richard Hazen III. His name will live on in his works and in his family.

