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Gail A. Hathaway

GAIL ABNER HATHAWAY

1895-1979

BY HERBERT H. VOGEL

GAIL ABNER HATHAWAY, a distinguished civil engineer, died on October 1, 1979, in Washington, D. C. The great engineers of history are those who, blessed with breadth and depth of vision and introspective power of reason, have persevered to make the world a better and safer place to live. Among such, the name of Gail Abner Hathaway stands high, for his contributions to the technique of estimating the magnitude and frequency of floods led directly to the design of safer structures for the prevention of damages and established hydrologic engineering as an important discipline of civil engineering. Criteria developed by him during his long service with the Corps of Engineers have become bases for the design of spillways and have influenced to a marked extent the design of all large dams.

Born at Menomonie, Wisconsin, on October 11, 1895, Gail Hathaway lived there with his parents until going to Oregon State University for a baccalaureate degree in civil engineering. Following graduation and marriage to Mary Rosamund Peterson in 1917, World War I drew him to service with the Army in France. When the war was over, he went to work in the office of the Oregon State Engineer. After a few years there, he accepted a position as Hydraulic Engineer with the Corps of Engineers, United States Army, serving in several field offices until called to the Office of the Chief of Engineers in Washington, D.C., in 1938, where he served until retirement in 1957. For the next six years he held the position of Engineering Consultant to the Department of Technical Operations of the World Bank, retiring a second time in 1963.

The bare facts thus cited contain few clues to the full extent of Gail Hathaway's technical achievements or the leadership he exercised in so many fields. Nor does the summation contained in *International U'ho's U'ho*, although in addition to listing his membership and offices held in national and international technical societies, it points out that his hobbies embraced golf, fishing, hunting, and genealogy and thereby reveals more of the whole man. Much more is needed, however, to portray the remarkable career that served to change completely the theories that controlled the planning and design of flood control dams. Revolutionary as these seemed when first advanced and in spite of jibes about the "Hathaway Flood," time proved his theories and deductions to be correct, and the dams to which they were applied have stood the test of time.

So well had he become known as a flood forecaster that he was called to Europe on October 24, 1944, by General Eisenhower's Headquarters in Paris to organize a forecasting service to predict stages and other conditions of flow that would affect the planned crossings of the Rhine River. For this service he received the Bronze Star Medal and a Presidential Citation.

Important as were his individual and specific achievements, his lasting fame rests on the criteria and procedures he developed for the determination of spillway design floods while in the Office of the Chief of Engineers. The standards developed there by him, though meeting with initial resistance, became accepted by the Corps and then by other federal agencies. Ultimately they became standards for the country as a whole, and then for the rest of the world. Today it is not unusual for an engineer in some far part of the world to assert that his dam has been designed to accommodate the "Hathaway flood."

Following the spread and acceptance of his doctrines, Gail Hathaway became active in the work of several national and international technical societies. In particular, he was an ardent supporter of the American Society of Civil Engineers (ASCE) at both local and national levels, serving as President of the National Capital Section in 1942 and as National President from 1946 to 1948. He was presented with ASCE's James J. R. Croes Gold Medal in 1947.

His postretirement activities kept him busy and productive over an extended period, during which he served as a consultant in con-

nection with the planning, design, and construction of Egypt's Aswan Dam and for the relocation of the Abu Simbel Temple, which would have been lost to the impounded waters. Other assignments included services as an engineering consultant to President Truman's Cabinet Committee on Palestine, as a consultant for the solution of Panama Canal problems, and as a consultant to the Venezuelan Government. He was Chairman of the U.S. Committee on Large Dams from 1948 to 1952 and then served as President of the International Commission on Large Dams until 1958. Other important assignments included a term as Chairman of the American Committee of the World Power Conference and as Vice-President of its International Executive Committee.

He wrote many technical papers during his long service with the Corps of Engineers, a number contained in special reports and sections of handbooks relating to flood control and water resource development. In recognition of his great contributions and achievements over the years, he was elected to the Corps' Gallery of Distinguished Employees. Other writings include:

- "Determination of Spillway Requirements for High Dams," *Proceedings of the Fourth Congress on Large Dams*, 1951.
- "Design of Drainage Facilities for Air Fields," *Transactions ASCE*, 1945.
- "Application of Hydrology to Flood Control," *Proceedings*, Penn State College, Hydrology Conference, 1941.
- "The Importance of Meteorological Studies in Design of Flood Control Structures," American Meteorological Society, 1939.

For his many contributions to the development of the Nation's natural resources he was honored with a Doctor of Engineering degree by Drexel Institute of Technology in 1951. He was a member of Sigma Tau and Tau Beta Pi honor societies, and a member of the Cosmos Club of Washington, D.C. (he resided in Washington, D.C., during his last years). Mr. Hathaway was elected a member of the National Academy of Engineering in 1979.

Wherever there stands a large dam built within the last twenty years, one may be sure that the downstream areas rest more safely and more securely because of the genius of Gail Abner Hathaway.