

Colorado Construction

Colorado's Highway Funding Crisis

Top Heavy/Highway Contractors
National Lab Funding in Limbo
Southern Front Range Report

Kenneth Wright Wright Water Engineers

Denver's
'water wizard'
has applied his
engineering
skills around
the world

Kenneth "Ken" Wright,
founder of Wright Water
Engineers of Denver,
thrives on adventure.

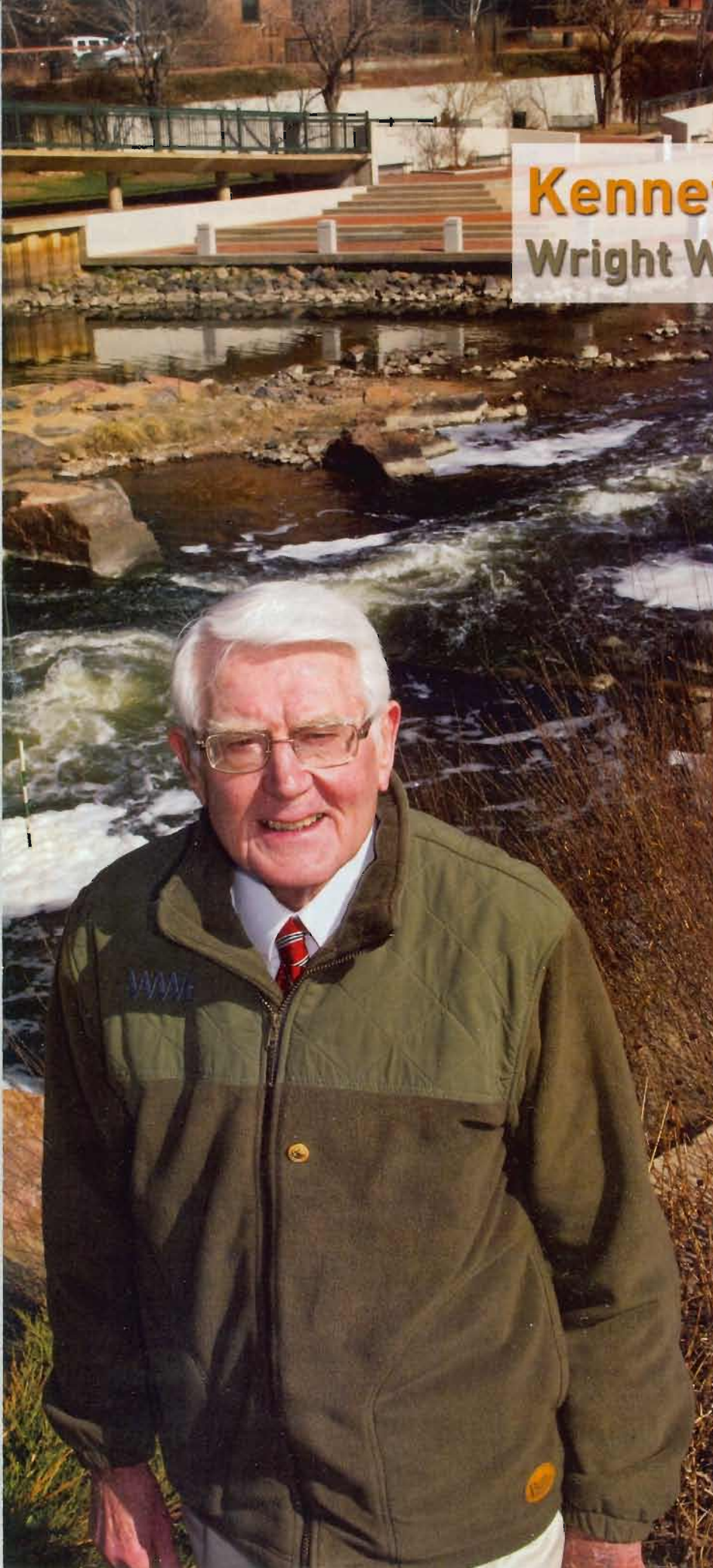
By Kimberly M. Graham

Ken Wright likes to go places.

Wright, an internationally respected expert on water engineering, water rights, hydraulics and hydrology, has worked in Australia, Peru, Saudi Arabia, Greece, Sri Lanka and France.

He has run a consulting engineering firm of 50 people, Denver's Wright Water Engineers, for 50 years, garnering awards and recognition from governments, civic and professional organizations.

The spry 79-year-old also has published countless books and papers and continues to woo and win huge clients such as ExxonMobil, British Petroleum and Adolph Coors.





Ken and Ruth Wright began paleohydrological explorations at Machu Picchu in 1994. They established the non-profit Wright Paleohydrological Institute, which has administered hydrological research of ancient water use in Machu Picchu, Ticon and Moray in Peru, Barbegal, France, and five Ancestral Puebloan sites at Mesa Verde.

For fun along the way, he and his family have skied (Ken and his wife Ruth have both achieved “national patrolmen” status), climbed mountains, scuba dived and kayaked.

Over There

For Wright, the lure of foreign lands glittered early. Around the time he graduated from the University of Wisconsin in 1951, with two degrees – one in civil engineering and one in business administration, an opportunity arose to work for the Arabian American Oil Co. “It was a troubled time, like now,” he recalls. “People were warning me not to go, that it would go up in flames.”



Ken Wright designed the Harvard Gulch Flood Control Project in the late 1960s for Mayor Currihan. This project was the inspiration for the Urban Storm Drainage Criteria manual.

True to his grit, Wright decided to go anyway, hiring on as a construction engineer. He says his years in Saudi Arabia were a big adventure, one that sparked a lifelong interest in foreign cultures and people. It also sparked Wright’s career in technical reporting, when one of his projects, cathodic protection of the 1,200-mi Trans-Arabian Pipeline, was featured in *Civil Engineering* magazine.

Another major life change was set in motion when Wright proposed to Ruth Spenner, whom he’d met six years earlier on a Milwaukee Junior Ski Club trip. Ruth had also gone abroad since then, working as a civilian with the U.S. Army in Germany. The couple married in Salzburg, Austria, in 1954.

Ruth joined Ken in Saudi Arabia for 18 months, until they moved back to Wisconsin to pursue graduate studies – civil engineering for him, law school for her. Ruth, who eventually served seven terms as a state representative in the Colorado Legislature, with six years as House minority leader, continues to be Ken’s perfect working partner and writing collaborator. They raised two daughters, Rosemarie and Leslie, both of whom absorbed their parents’ love of stimulation, activity and new scenery.

Boulder Bound

In 1957, deciding to focus on stream channel hydraulic and sedimentation engineering, Wright relocated to take a job with the U.S. Bureau of Reclamation in Denver. “We had wanted to move to Colorado. We’d bought land in Aspen in 1953 [to celebrate their engagement] and thought that what we’d like to do was live there. But we ended up choosing Boulder, and we liked it so much that we’ve never left.”

Even during a relatively short tenure at the bureau, Wright managed to do something remarkable. While taking stream samples, his team’s boat capsized, throwing several people overboard. Seeing that one of them was in dire trouble, Wright, who’d

already made his way ashore, dove back into the current and pulled the man to safety. In 1957 he received the Department of Interior's Gold Medal for Valor in Washington, D.C.

In 1958, his independent spirit led him to found his own consulting firm, Wright Water Engineers, and he's never looked back. A successful entrepreneur whose firm has grown to offices in Denver, Durango and Glenwood Springs, he simply says, "You have the freedom to make your own decisions."

Making an Impact

Freedom is worth a lot to Wright.

"Consulting engineering is a wonderful business to be in," he says. "I recommend to young people that a career in civil engineering has the most impact on the environment and on social welfare and infrastructure. If not that, then law," he says, citing his wife's profession, "which is another opportunity for helping people."

Then he pauses and adds, "Or journalism. We've done a lot of that."

Wright has been active in both the engineering community and the community-at-large, serving four years on the Boulder City Council (1971-1975) and nine years on the Colorado State Board of Registration for Professional Engineers and Land Surveyors (1975-1984). He's participated in the American Society of Civil Engineers in multiple roles, including chairing the Hydraulics Group (Colorado Section), the National Hydrology Committee and the Executive Committee of the ASCE Hydraulics Division.

During his years in Colorado, Wright led many groundbreaking projects. After the 1976 Big Thompson Flood, which killed more than 140 people, he was appointed by the governor as special assistant (later, consultant) to manage the state's flood recovery efforts.



Ken Wright spearheaded the process to have four Mesa Verde reservoirs designated as a Historic Civil Engineering Landmark by ASCE. He is shown at the dedication with ASCE's Kelly Natale.

He designed the well-known fenceless Harvard Gulch Flood Control Project and then published his proven hypotheses as Urban Storm Drainage Criteria Manual (1969, updated 2001) for the Denver Regional Council of Governments. Wright's performance-oriented design criteria, as laid out in the manual, have been adopted widely and helped introduce greener approaches to urban drainage, planning and design.

Water Power

One of Wright's favorite Colorado projects was the redevelopment of the South Platte River and Confluence Park in Denver.

Awards

President's Award, Colorado Foundation for Water Education, 2008

"Friend of the District" award, by Urban Drainage and Flood Control District (UDFCD), 2008

Bertolt Brecht College, Honorary Diploma, Lima, Peru, 2007

Order of Merit for Distinguished Service to the Republic of Peru, 2007

Ricardo Palma University, Profesor Honorario, Lima, Peru, 2007

American Society of Civil Engineers, Honorary Membership Award, 2006, Distinguished Member, 2007

American Society of Civil Engineers, Lifetime Achievement Award, 2005

American Council of Engineering Companies of Colorado, Orley Phillips Award, May 2004

American Council of Engineering Companies of Colorado, George Washington Award, May 2002

University of Wisconsin School of Engineering, Distinguished Service Award, October 2002

Universidad Nacional De Ingenieria, Profesor Honorario, Lima, Peru, 2002

South Platte River Greenway, Friend of the River Award, 2001

American Society of Civil Engineers, History and Heritage Award for Original Research on Water Supply of Machu Picchu, 2001

American Ethics in Business Award, 1999

Colorado Ethics in Business Award, 1996

Colorado Historical Society, Stephen Hart Award, 1996

National Ski Patrol, Purple Star, Lifesaving

U.S. Department of Interior, Gold Metal for Valor

National Society of Professional Engineers, Dam Safety Award

In about 1973, then-State Sen. Joe Shoemaker began talking about re-establishing the long-maligned river as Denver's "front door." Recruiting Wright as the lead engineer, Shoemaker took him on a raft trip down the Platte to show off the "incredible potential for the river."

Shoemaker ran for mayor, with the redevelopment as part of his agenda. "Well, he didn't win, but he did get the ear of [Bill] McNichols, who won," and the project was undertaken, Wright says. Guided by Shoemaker and Wright, and undertaken in small, manageable steps, the development of a people-friendly riverfront was undertaken. The immensely popular Confluence Park is still considered a crown jewel of the metro area.

Wright also discovered and immersed himself in paleohydrology, the study of water systems created by ancient cultures. He has studied a prehistoric cistern built by the Anasazi at Mesa Verde. Imagining how hard the Anasazi must have worked to build and maintain their water supply, Wright notes that by contrast, "We don't appreciate our supply and we complain as the rate increases."

He is equally enthused about discovery of a second-century Roman grain mill near Arles, France, powered by 16 water wheels and fed by a 30-mtr-long aqueduct.

But ask Wright to speak about his accomplishments, and he will instantly talk about his work in Peru at the ancient sites of Machu Picchu, Tipon and Moray. For long-term research and publications about the findings, the Republic of Peru awarded he and Ruth each the ASCE History and Heritage Award in 2001 and in 2007.

In contrast to that level of recognition and governmental support, Wright recalls a rocky beginning. "It took 20 years just to get a work permit," he says. "They weren't all that enthusiastic about opening up to North Americans."

But when a Wright supporter won appointment to a post in the Clinton administration, the permit came "within two weeks," he adds.

Fascinated and rewarded by the work, the Wrights began spending a good deal of time in Peru: a couple of weeks up to three times a year. One of the most exciting moments came at Machu Picchu when an unearthed ceremonial fountain that had been buried for five centuries gushed to life.

Wright says that from paleohydrology, he has learned the importance of water in human history. "I've also learned to be disciplined, to focus on what we're doing and to document it very carefully," he says.

Much to their clients' benefit, these lessons are applied to all Wright Water Engineers' projects.

An avid mountaineer, Wright served 32 years on the board of Colorado Mountain Club. Asked why he volunteered for one organization for so many years, he says, "We met lots of people and made lots of friends that we've kept all these years. And," he adds, "climbing [fourteeners] takes you to places you'd not ordinarily go." ■



Wright Water Engineers has worked for the Adolph Coors Company since the 1970s. In this photo, he is about one mile into Coors' London Mine.

Favorite Engineering Projects Around The World

Machu Picchu, Peru

This Inca archaeological site represents the remarkable and uncanny ability of ancient engineers to build sustainable developments, even under adverse conditions. AD 1450 to 1540.

Mesa Verde Reservoirs

Four reservoirs built by the Ancestral Puebloans at Mesa Verde demonstrated ancient water management skill and determination. AD 750-1180.

Chicago Deep Tunnel

Storage of storm runoff beneath Chicago was an ingenious and environmentally sound solution to flooding and water pollution problems. Mid-1970s to the present.

Hoover Dam

A masterpiece of federal public works engineering and construction. 1931-1935.