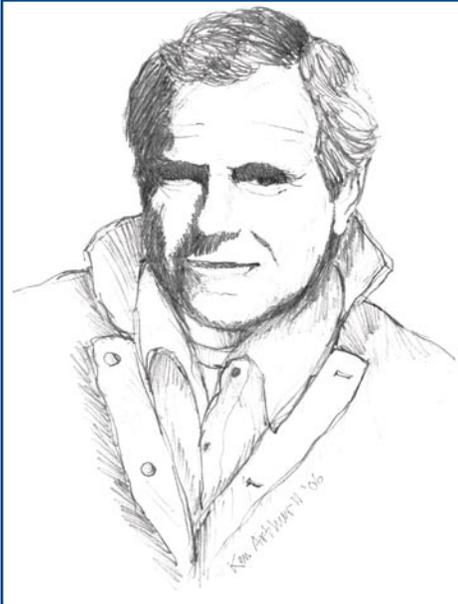


# Davis L. Ford, Ph.D., P.E., NAE

By Pam Arthur, Special Assistant to Dr. Ford (1985-present)



FordArticlePhoto01.tif:  
Davis L. Ford

It seems safe to suggest that Isaac Newton had foreknowledge of Davis Ford — and, for that reason, developed the second part of his First Law of Motion: "...an object in motion stays in motion with the same speed and in the same direction unless acted upon by an unbalanced force." Davis and that "unbalanced force," though, have not yet come face to face. He is still in full motion, moving forward at top speed at nearly 74 years of age — full of energy and enthusiasm. Dr. Thomas M. Hatfield, Director, Military History Institute and former Dean of Continuing Education, University of Texas at Austin, in March of this year, 2011, said, "If you do not know, you should be apprised that when Davis attacks a project...it's the equivalent of being struck by a great tsunami."

Davis has used his boundless energy very capably, resulting in his becoming a world-wide recognized expert and consultant in the problems associated with special water pollution control issues. But, what began his path in engineering over fifty years ago was another type of water

problem — the lack of it, the extensive and ruthless drought of the 1950s.

Davis was born in West Texas in 1937 to an agriculturally-educated father and a literarily-intellectual mother. Once his father switched from county agent to rancher and farmer in the mid-1940s, he tried to raise Davis to follow in his footsteps.

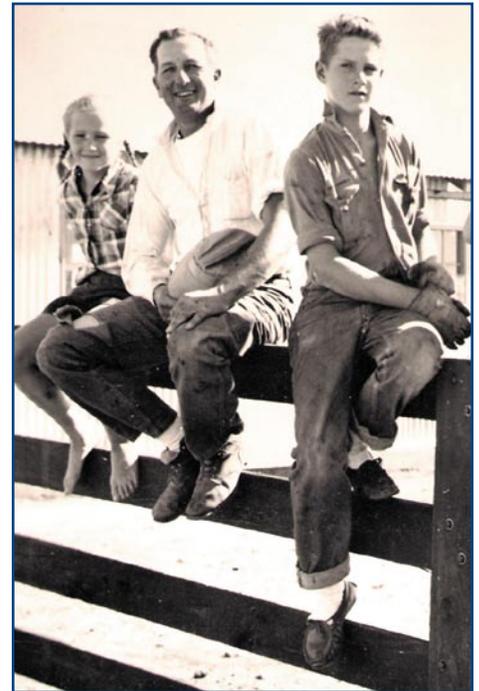
"My dad would get in the pickup and drive me around what we called the farm (several sections of dry land farm and pasture in Deaf Smith County on the *Llano Estacado*). We'd drive around to every mother cow, all were registered Herefords, and he'd tell me about this cow and that cow. And then, he would put me to work. At that time, I was too young to get on a tractor or a cutting horse; so, my dad figured out work for me to do, like dig fence post holes, chop weeds, flank calves, and other menial tasks. He worked me to death, and that's where I learned the work ethic — from my father.

"When I was in my early teens, Dad tried to make a cowboy out of me, putting me on our feisty cutting horse, Blanco, and having me cut mother cows out of a herd. This became a routine chore for me. I was amazed Blanco knew to target the cow. When he did, I simply would hold onto the saddle horn and let him do all the work<sup>1</sup>. I loved being in the saddle — and I still do. Up until the terrible drought of the '50s and the collapse of the cattle market, all I wanted to do was be a rancher and raise cattle and horses. But, I watched my father work the dry, hard soil — working with all his heart to make it yield what it could not. He did not get a return for his steadfast efforts, and I thought then I would look elsewhere to make my way in life."

A childhood friend of Davis, Jim McLaughlin, says this about growing up in West Texas and Lubbock:

*We grew up on the plains, with cactus and sand,  
Dirt roads and bar ditches scarred the land.*

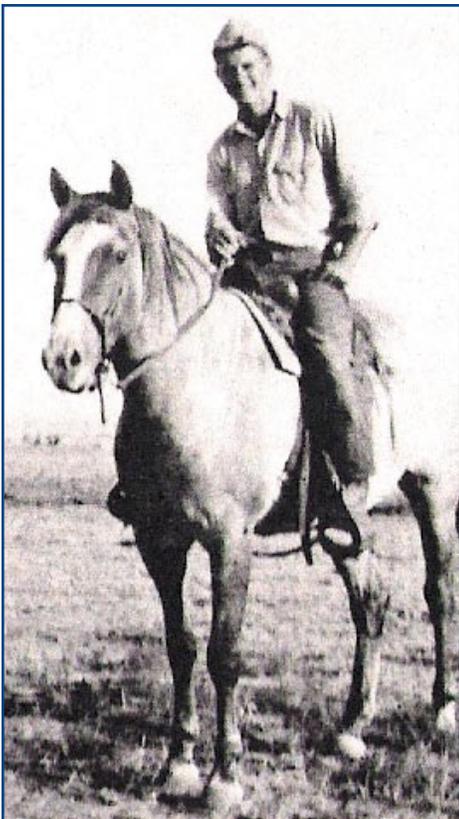
*Glare ice in winter, floods every spring  
Sand storms in summer, critters that sting  
Cactus to stick you, rattlesnakes that bite  
Wind in the daytime, tornados at night.  
Our crops were taken by the seven year drought  
We just couldn't wait to get ourselves out!  
The world view in Lubbock is downright plain  
A man's only asset is his good name  
Work hard and honest, be faithful and true  
Good things will always come back to you.*



FordArticlePhoto02.tif:  
Davis (right), his dad and sister at the farm, 1949

Because of the advice of another friend's engineering father, Davis turned to engineering and, because of his own father, entered Texas A&M University. He has

1. This was a good lesson that Davis learned early — not to micro-manage the competent, talented people he would select for a project team. Dr. Gloyna pointed out, "Davis had the ability to bring in specialists in engineering, in science, in management. He would bring all these thoughts together to solve the problems of the day." Davis knew how to handle these experts.



FordArticlePhoto03.tif:  
Can a Cowboy be an Engineer? 1954

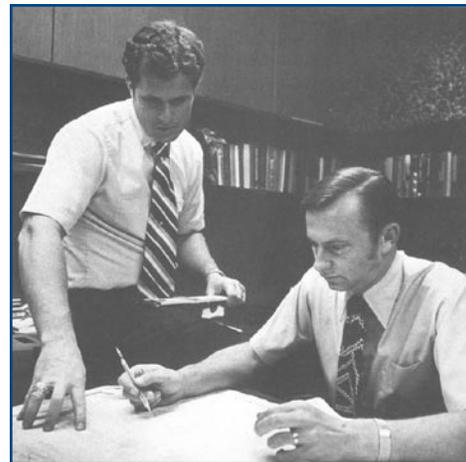
never regretted either of those decisions. His graduate work took him to The University of Texas at Austin where he had the privilege of learning from and working with two engineering giants: Earnest F. Gloyna and Wes Eckenfelder. Again, he is very appreciative of his mentors and the opportunities they provided. They prepared him for an engineering career mixed with academic teaching and private entrepreneurship, designing water and wastewater treatment facilities, project development and management, team development, grant and research development, business and financial administration, national and international lecturing of complex environmental engineering issues, interaction and communication with specialist of diverse scientific fields, accrediting higher education engineering programs, extensive publishing, and effectual participation in many professional organizations.

Many, many times Davis has said, "Time is irreplaceable and precious, and I don't like to waste it." Well, that is obvious, and today, he is a highly respected



FordArticlePhoto04.tif:  
Senior in the Texas A&M Corps of Cadets (just before Commission in the U.S. Army)

and sought after consulting engineer. In an interview in March of 2011 with Dr. Gloyna, the conversation included what constitutes a consulting engineer. "Many people can solve difficult issues but not everyone is able to solve the issues and also communicate with other professionals in different disciplines. The consultant has to have had the experience in solving difficult issues, and people must respect his professional competency. There is a difference between an ordinary individual who might be able to work a problem with some assistance and an individual who has the foresight of knowing that he has complete understanding, competence, and the ability to resolve the issues. Davis has all of this — and the drive and the deep-seeded interest in resolving broad issues. Besides, he's intelligent and an effective communicator."



FordArticlePhoto05.tif:  
Davis and Wes Eckenfelder, 1968. *Water Pollution Control* (beginning their first book together)



FordArticlePhoto06.tif:  
Happy Times. Gloyna, Ford, Eckenfelder.

## Graduate Work and The Following Years

In 1965, Wes Eckenfelder asked Davis to remain at The University of Texas at Austin to be his first Ph.D. student. Davis, with a Masters in Environmental Health Engineering, was on his way to Dallas to join the firm of Forrest & Cotton and begin his engineering career. He changed his plans. "Maybe my mother's penchant for learning finally kicked in...It was hard work...the doctoral dissertation was consuming, but it was a thrilling venture."

Davis' Dissertation Topic (January 1967): "The Effect of Process Variables on Sludge Flocculation — Formation and Settling Characteristics." The objectives of Davis' work: (1) to evaluate (in a laboratory scale investigation) the effects of the variables which affect the operation of the activated sludge treatment of municipal and industrial wastes, and (2) to correlate the information with field data and refine predicting models

2. Recently, April, 2011, Davis presented a lecture at Oklahoma State University which included some of his relevant doctoral material. This lecture was endowed by Wes Eckenfelder's former graduate students and others.



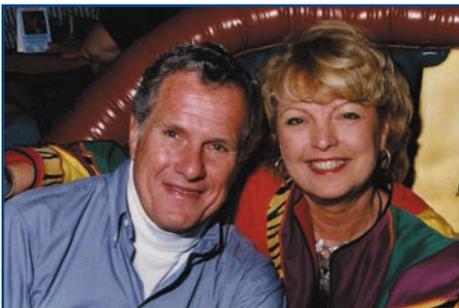
FordArticlePhoto07.tif:  
Davis and Gwen on their Wedding Day – 1960



FordArticlePhoto09.tif:  
Celebrating their 50th Wedding Anniversary



FordArticlePhoto10.tif:  
Young family with 3 girls — 1976



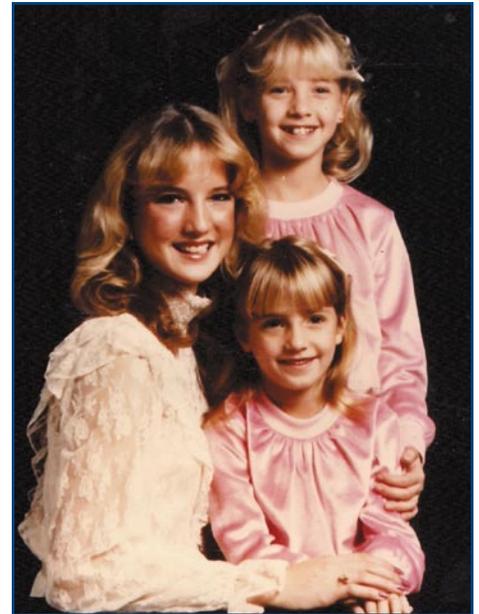
FordArticlePhoto08.tif:  
Traveling Couple, 1990s

where possible. While many of the methods and findings of Davis' work are still relevant today — and still part of his teachings<sup>2</sup>, such as refining mathematical modeling to insure that modeling inputs are more accurate, the very important aspect of his dissertation was that Eckenfelder taught him predictive modeling and practical application for wastewater processes.

Upon completion of his doctoral work, Davis, once again, changed his plans. He was ready to accept a position at the University of Florida in Gainesville to begin an academic career when Dr. Gloyna offered

him the position of Assistant Director of the Center of Research for Water Resources<sup>3</sup>. This was a great start for Davis' specialization in industrial pollution control because of the Center's grant money from chemical and petroleum refining industries for environmental-related research. Moreover, it kept him in his native state — Texas.

In 1968, Dr. Gloyna offered Davis the chance to become an adjunct professor at UT-Austin. A great opportunity. Indirectly, it allowed Davis to get into the private sector. Dr. Harvey Ludwig noticed the young adjunct professor's talents and asked him to open an Austin office for Engineering Science, Inc. This was a new company on the leading edge of advanced environmental consulting worldwide, founded by Dr. Ludwig in Arcadia, California. Davis accepted, developed the Austin office with aplomb, and has no regrets about the changes in his career plans over the years. As Dr. Ludwig said before his recent death, "Davis is one of those rare engineers with both down-to-earth engineering capabilities combined with high level R&D talent. He is personable, dynamic, and 100 percent Texas...He proceeded to



FordArticlePhoto11.tif:  
The Daughters — Kelly, Kristy (standing), Katy

organize ES as a Davis Ford Dukedom..." or as Dr. Hatfield would say, "Davis attacked it like a great tsunami." And then, a friend from West Texas might say that Davis simply knew how to "cowboy up"<sup>4</sup>.

### Davis L. Ford & Associates

In 1985, Davis formed his own consulting engineering firm. Over the next 26 years, up to today, 2011, over 300 clients have walked through his doors and hired his expertise — unsolicited by him. Davis' reputation was and is the magnet. The problem solving required was applied to a wide-range of environmental issues, beginning with his first client, the City of Austin and its underperforming, out-of-compliance water and wastewater facilities, to a current client, Formosa Plastics of Taiwan (as well as of Point Comfort, Texas), for whom he is overseeing its compliance with environmental standards on a par with EPA in the United States.

Dr. Gloyna pointed out, "Davis could have retired but he has chosen to continue contributing to the professional aspects of environmental engineering; thus, he is now internationally recognized as one of the outstanding contributors of the science of engineering."

3. Earnest Gloyna founded the Center of Research for Water Resources in the 1960s and developed it by inviting industry to bring its environmental issues for analysis and resolution. Industry accepted, bringing interesting, complex issues and the necessary funds for the required research. The Center put the College of Engineering at The University of Texas at Austin at the top of the list for excellence in engineering programs in the United States.

4. "cowboy up" means to take courage, to go ahead and tackle the job despite the risk and pain. It is an integral part of the cowboy code.



FordArticlePhoto12.tif:  
Katy, Kelly, Kristy — all grown up



FordArticlePhoto14.tif:  
Cimarron Rodeo, New Mexico, 2006. All\* the Family Attending the Oldest Standing Rodeo in the Southwest (\*4 grandchildren yet to come)



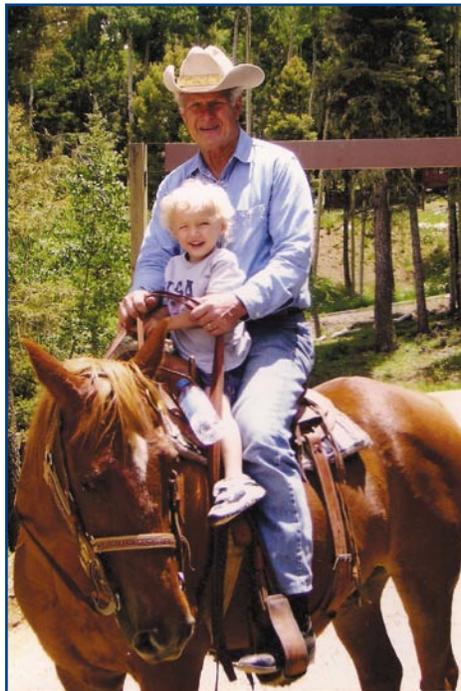
FordArticlePhoto13.tif:  
Grandparents Gwen and Davis - and the first 6 grandchildren (more to follow)

## Family Life

As outstanding as Davis is as an engineer, he is equally outstanding as a family man. A rare combination. “Your family is your tap root,” says Davis. “Nothing is more important.”

In 1960, after a three-year courtship, he married Gwen Andrews, born and raised in Texas — in Bryan, next door to Texas A&M to be exact. “I was driving back home from my Army time on the East Coast at Aberdeen Proving Ground near Baltimore — and when I crossed the Red River, I knew...I knew I was ready for the next step — and that meant getting married, especially to a Texas gal who shared my values and came from my background. And that meant Gwen — so I called her.” For over fifty years, Gwen and Davis have lived their strong sense of family and created an outstanding, loving family community of three daughters, three sons-in-law and ten grandchildren (the tenth was due this past June 2011).

The wife of a busy, sought-after man has to be talented in her own right. Gwen is a graduate of the University of Texas at Austin with highly developed personal and social skills, organizational skills, and spiritual and nurturing skills. After raising



FordArticlePhoto15.tif:  
Maybe — A Grandson Cowboy?

Kelly, Kristy and Katy, Gwen applied her skills and her compassionate generosity to The Settlement Home, a home for abandoned and/or abused girls. In 2006, Gwen was elected President of the organization, as well as honored by Austin Ballet as one of Austin’s outstanding volunteers of the year — a “Woman on Her Toes.”

“In Germany we say: good engineers always (and only) get daughters.” (Detlef Albrecht, 2011) None of Davis’ daughters followed his footsteps to become engineers — but they all graduated from Texas A&M University!

## [SIDEBAR]

### Peer Comments

“When Davis Ford was president of The American Academy of Environmental Engineers in 2001, he had to face a situation that no other president, to my knowledge, had to address. A long-time staff member was dismissed, and he promptly sued the Academy for wrongful dismissal. If the court ruled in his favor, which by all accounts had merit, it would have severely crippled the Academy’s financial position. Davis was able to retain the services of an outstanding attorney and former U.S. Senator to settle the case at little or no cost to the Academy. Dr. Ford spent most of his presidential year dealing with this serious problem.”

**Earnest F. Gloyna, Ph.D., P.E., NAE**  
President of AAEE, 1983, Former Dean, College President of AAEE, 1983  
Former Dean, College of Engineering, University of Texas at Austin

“Davis and I immediately bonded — socially and professionally — We had good chemistry — and still do.

“At no time did Davis try to influence me nor at any time did I try to influence him. As a result, we came up with a good answer for things. Communication is the key. There are a lot of brilliant people who cannot communicate their ideas to others — and Davis has the ability to be clear with an idea.”

**W. Wesley Eckenfelder, Jr.**  
(Interview, 2010) (1926-2010)

“I have known Davis Ford since graduate school. We were, then and now, very good friends. Both of us were honored to work under Wes Eckenfelder, and both of us had lots of great experiences with him all over the world. It is a pleasure for me to acknowledge Davis in this AAEE publication.”

**Carl Adams, Jr., Ph.D., P.E.**  
Doctoral Classmate of Davis

“Davis has so much energy — and almost 74 yrs old — he spent the night here in Fredericksburg last week and left that next morning because he had to give a lecture that afternoon in Austin — and then he flew to Corpus Christi to give a lecture the next

morning — and the next day he flew to Taiwan to consult with a client — and he's 74!"

**James Collins**

Retired CEO, Bell Dairies (Dean Foods)  
Childhood Friend since 1945

"In the Fall of 1977, I came to Texas from Nepal as a graduate student. My first semester at UT, I took a course from Davis in the design of water and wastewater systems. We had instant bonding. Davis was never a full-time professor, always part-time because he practiced, and that is why he was so different from the other professors who taught mainly theory. Davis taught more of the practical aspects of engineering. It was rare to have a professor who had designed what he taught. At this time, he was with Engineering-Science — lucky for us students because he opened up its library and equipment to us — and we would talk to the engineers. He gave us exposure to a working engineering firm. Besides all this, Davis had a wonderful style of lecturing and grabbing your attention."

**Raj Bhattarai**

Water & Wastewater Utilities  
City of Austin

"(Davis was one of Engineering-Science's) younger officers who substantially contributed to the growth of the company...a brilliant engineer who was later to become nationally recognized as an expert in the treatment of industrial wastes. He proceeded to build up a large and talented professional staff as head of the Southwest Region and secured and worked on many projects during that period of time. He became a senior member on our Board of Directors — and then with two others arranged our merger with the Parsons Corporation. He was also a pleasure to have as a colleague...and widely recognized in the company for his contributions to many of ES's national projects, and also for his engineering and management expertise."

**Robert L. White**

Former CEO, Engineering-Science, VP of The Parsons Corp.

Excerpt from his memoirs, "An Engineering Odyssey: Over Fifty Years of Practice in an

Interesting Profession," October (2007)

"Davis is the epitome of the friendly, open, welcoming Texan. I first met him on a groundbreaking PACT project at DuPont in the early '70s. We have stayed in touch every since. When I moved to Austin a few years ago, he was the first one in the environmental engineering community to welcome me and get me plugged into the local environmental scene.

"Davis has had a long and illustrious career, and is still contributing to environmental engineering and education. I have always enjoyed hearing him speak and have learned something new from him every time. And when you need help with an activity, he is the first to put his tremendous energy to work with you."

**Brian Flynn, P.E., BCEE**

President, AAEE

"I met Davis for the first time almost 40 years ago in Jerusalem at the IAWPR Conference in 1972. Over the years our contacts developed due to our technical discussions and additional activities of friendship. In 1980 and 1981 we exchanged our daughters. Kelly Ford came to Germany...and the next year our Katy came to Austin. I include two photographs of our traditional water engineer revivals in Essen, Germany, taken in 1998 and 2010 with me, Davis and Professor Klaus R. Imhoff...outstanding engineers and honest men."

**Ing. Detlef R. Albrecht**

Former Director Ruhrverband  
Essen, Germany



FordArticlePhoto16.tif:  
Davis Ford, Klaus Imhoff, Detlef Albrecht. Essen, Germany 1988.

"I met Davis L. Ford first in June, 1969. The occasion was a training course in sanitary engineering in Poland. The Polish people were very hospitable, and every evening we were invited somewhere together. (That is how) we became friends. Later that year, I traveled to USA and visited with Davis. He introduced me to Earnest F. Gloyna. We met many times during International Conferences.

"In 2000, Davis was President of The American Academy of Environmental Engineers. He invited me to Washington to give a speech at the National Press Club and later to Austin. We spent an evening at his ranch and went to Texas A&M the next day. He showed us The George Bush Library where one of the sculptures of "Horses Jumping Over the Berlin Wall" is located.<sup>5</sup> I like Davis' wide spread interest — *The Last Cowboy*<sup>6</sup> as well as *Industrial Water Quality*, his book with the late Wes Eckenfelder.

Kind regards,

**Professor Dr.-Ing. Klaus R. Imhoff**

Former Director, Ruhrverbahn and Ruhrtalsperrenverein  
Germany

"Davis is one of the finest men I have met in my life. He has been an outstanding father and husband. He has a reputation for being straight forward and honest, very professional as a businessman, representing the conservative side. He is a loyal and hard-working Texas Aggie. I am privileged to have him on my Board of Directors and more so to have him as a friend."

**Clayton W. Williams, Jr.**

CEO, CWEI (NASDQ)  
Midland, Texas

**Awards and Honorary Affiliations**

Sigma Xi  
Tau Beta Pi  
Chi Epsilon  
Phi Kappa Phi  
Marine Board, National Academy of Sciences, National Research Council  
Environmental Engineering Committee of

5. These sculptures were unveiled at both Texas A&M and in Berlin, commemorating the anniversary of the Fall of the Berlin Wall in 1989. The sculptures symbolize the kind of passion horses have in seeking freedom.

6. Davis authored a biography (2002) on a champion cowboy, Leroy Webb, who is still in the saddle from sun up to sunset or as Leroy would say, "can't see to can't see" — working cattle, horses, and the land like the cowboys of yesterday did.

the Science Advisory Board of the U.S. Environmental Protection Agency  
Distinguished Engineering Alumnus, Texas A&M University, 1985  
President - 130,000 member Texas A&M Alumni Association of Former Students, National and International, 1985  
Chairman - Water Pollution Control Federation Program Committee, 1986-1989  
Distinguished Alumnus - Texas A&M University, 1990  
Chairman - President's Advisory Council, Texas A&M University, 1991 to ?  
American Academy of Environmental Engineers Kappe Lecturer, 1994  
Distinguished Engineering Graduate, University of Texas at Austin, 1995  
President - American Academy of Environmental Engineers, 2001  
Chrmn., Ethics Committee - American Academy of Environmental Engineers  
Elected to the National Academy of Engineering, 1997  
Distinguished Civil Engineering Graduate, Texas A&M University, 2000  
Inducted into the Civil and Architectural Engineering Academy of Distinguished Graduates, University of Texas at Austin, November 2003  
Lifetime Achievement Award, Water Environment Federation, 2009

## Books Published

*Water Pollution Control*, with W. W. Eckenfelder, The Pemberton Press, Jenkins Publishing Co., Austin (1970)  
*Development of Design and Operational Criteria*, with W. W. Eckenfelder and C. Adams, CBI Publishing Co., Boston (1981)  
*Industrial Wastewater Management Handbook*, Edited by H. S. Azad, McGraw Hill, New York (1976)  
*Carbon Adsorption Handbook*, Edited by P.N. Cheremisinoff and F. Ellerbusch, Ann Arbor Science, Ann Arbor (1978)  
*Activated Carbon Adsorption for Wastewater Treatment*, Edited by J.R. Perrick, CRC Press, Boca Raton (1981)  
*Toxicity Reduction Evaluation*, Edited by D. L. Ford, Technomics, Inc. (1993)  
*Industrial Water Pollution Control, Fourth Edition*, W. Wesley Eckenfelder, Davis L. Ford, and A.J. Englande, McGraw Hill (2008)

## Books Published Outside Field

*The Last Cowboy*, A biography of Leroy Webb, Eakin Press (2002)  
*Leroy the Cowboy: Children & Horses*, co-authored with Pam Arthur, LastCowboy Press (2006)  
*Reflections of a Soldier & Scholar: The Life of Earnest F. Gloyna*, Morgan Printing (2009)