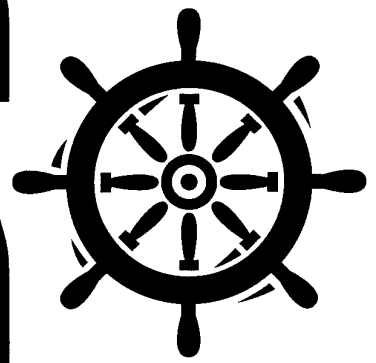


REFLECTIONS

Arkansas River Historical Society



Spring 2012

HALL OF FAME HONORS THREE IN 2012



Above from left: James B. Cummins, Augustine J. Fredrich, P.E., and Margaret S. Petersen, P.E.

FT SMITH, AR –The Arkansas River Historical Society hosted three honorees at its Hall of Fame awards luncheon during the annual Navigation Conference of the McClellan-Kerr Arkansas River Navigation System on May 9, 2012 at the Holiday Inn City Center, Fort Smith, AR. The three honorees are: James B. Cummins of Oklahoma; Augustine J. Fredrich, P.E. and Margaret S. Petersen, P.E. of Arkansas.

Induction into the Hall of Fame is a tribute to those who in their unique ways have contributed outstanding and noteworthy service to the development of the Arkansas River, its basin, and the McClellan-Kerr Arkansas River Navigation System. The development of the multipurpose project of this magnitude requires the commitment of multiple of talents and efforts over a span of decades, said Paul Revis, president of the Historical Society.

James B. Cummins was born on the family farm in Nash, Oklahoma on March 31, 1922. He lived in Enid, Oklahoma for 88 years until his death in January, 2011. After graduating in 1947 from Oklahoma State University with a degree in Architectural Engineering, Jim joined his father Harry E. Cummins and brothers Harry and Robert in founding H. E. Cummins and Sons Construction Company, and later Cummins Construction Company, Frontier Steel Corporation and Cummins Investment Corporation. The company's businesses started with building schools, churches and hospitals but soon branched out into building bridges and dams in Oklahoma, Arkansas and Texas. In a joint venture with Amis Construction Company, H. E. Cummins and Sons Construction was awarded the contract for the coffer dam at Robert S. Kerr Lock and Dam, just the beginning of the family's significant and lasting contribution to the development of the McClellan-Kerr Arkansas River Navigation System.

Through Jim's involvement and leadership, the Cummins family businesses built and fabricated the steel for seven of the bridges spanning the waterway, constructed the initial public improvements at the Port of Muskogee, built barges, operated a towing company, acquired lands for the development of the largest private port development on the waterway, Frontier Terminal in Muskogee, Oklahoma, and became a major shipper of petroleum products, beginning in 1971 with the shipment of oil from the Sun Oil refinery in Tulsa, Oklahoma. Jim operated Frontier Terminal until the time of his death.

Augustine J. Fredrich, P.E. obtained his BSCE degree from the University of Arkansas in 1962 and began a 19-year career with the U.S. Army Corps of Engineers as a Hydraulic Engineer in the Little Rock District where he was involved in the planning and design of hydroelectric projects for the McClellan-Kerr Navigation System and in the development of procedures for operating multiple purpose projects in the Arkansas and White River basins. In 1966 he was chosen as one of the first staff members of the Corps' Hydrologic Engineering Center (HEC) in Davis, CA. Between 1966 and 1972 he served HEC as Director of the Corps' International Hydrological Decade Project and as Chief of the Planning Analysis and Research Branches. He also served on loan to UNESCO as Professor of Systems Analysis at the Federal University of Rio Grande do Sul in Porto Alegre, Brazil, and as a consultant to government agencies in Guatemala and Peru. In 1972 he received an MSCE degree from California State University at Sacramento.

Mr. Fredrich was chosen by the American Political Science Association as a Congressional Fellow in 1972 – the first civil engineer ever chosen for that program. During his fellowship he served on the staffs of Congressman

John P. Hammerschmidt, ranking Republican on the House Public Works Committee, and Senator John L. McClellan, Chairman of the Senate Appropriations Committee. In 1974 he returned to the Corps as Senior Policy Analyst for Engineering in the Office of the Chief of Engineers. In 1976 he was chosen as the first civilian to hold the position of Director of the Corps' Institute for Water Resources.

After leaving the Corps, Mr. Fredrich was employed as Professor of Civil Engineering at the University of Southern Indiana in Evansville, IN, from 1979 to 2003. He served as Chairman of the Engineering Department from 1981 to 2003 and as Associate Dean of the School of Science and Engineering from 1986 to 2003. In 1993 he was named the University Distinguished Professor for his accomplishments in teaching excellence, research, and community service.

Since retiring as Professor Emeritus of Civil Engineering Mr. Fredrich has been employed as a consulting engineer by Morley and Associates in Evansville and FTN Associates in Little Rock. He is also employed as a freelance technical writer and editor.

Mr. Fredrich is a Diplomat of the American Academy of Water Resources Engineers and a Fellow of the American Society of Civil Engineers (ASCE). In 1993 he received the ASCE Julian Hinds Award for career accomplishments in water resources planning and management. In 2009 he received the Society's Lifetime Achievement Award. He will receive the Society's History and Heritage of American Civil Engineering Award at the ASCE International Convention in Montreal, Canada, in October.

-See "Hall of Fame" on reverse-

The Arkansas River Historical Society seeks to preserve the history and increase public awareness of the Arkansas River and the development of its basin. Through the acquisition, research, interpretation, and display of artifacts, and the development of educational programs, the River's contributions to the future will be secured through the preservation of its past.

Editorial contributions to Reflections are appreciated.

Please mail these to:
 Arkansas River Historical Society
 5350 Cimarron Road
 Catoosa, OK 74015.
 Telephone: (918) 266-2291
 Fax (918) 266-7678;
 E-mail: museum@tulsaport.com
 Website:
www.aopoa.net/history/society.htm

Historical Society Officers

Chairman:

Randy Tardy

President:

Paul Revis

Vice President, Arkansas:

Paul Latture

Vice President, Oklahoma:

Ted Coombes

Vice President, Kansas:

Gerald Holman

Secretary:

Charlotte Pyle

Assistant Secretary:

Cindy Green

Treasurer:

John Hill

Hall of Fame—continued

Mr. Fredrich is the author or co-author of more than 50 professional papers published in national and international engineering journals. He is also the author of *Sons of Martha*, an anthology of readings on civil engineering history and ethics. He and his wife Cecelia presently reside in Little Rock.

Margaret S. Petersen, P.E. was born in Rock Island, Illinois, in 1920. In June 1942 she was employed as a draftsman by the Corps of Engineers Rock Island District and was selected as one of ten employees chosen to go to Panama to complete contract drawings for the Three Locks Project. During the year in Panama she enrolled in the College of Engineering at the University of Iowa at a time when it was uncommon and difficult for women to obtain admission to engineering schools. She worked her way through school as a technician in the Corps hydraulic laboratory at the university, earning her baccalaureate degree in August 1947.

Margaret began her engineering career as a hydraulic engineer at the Corps Waterways Experiment Station (WES) where the Mississippi Basin Model, the largest small-scale working model in the world, was nearing completion. Over the next five years she participated in the design of proposed testing programs for the model, helped develop operating techniques and designed instrumentation to obtain model results, reviewed and analyzed test data, and supervised pioneering research on model roughness and the effects of model scale distortions on applicability of model data to the real world.

In 1952, Margaret returned to the University of Iowa for graduate study in hydraulics. She received the Master's degree in mechanics and hydraulics in 1953 and returned to the Corps of Engineers at the Missouri River Division office in Omaha where she worked on a variety of Missouri River navigation and bank stabilization projects. In 1955 she transferred to the Corps Little Rock District to work on Arkansas River bank stabilization and channel rectification projects that were a prelude to the design of the McClellan-Kerr Navigation System.

Construction of the Arkansas River Project was the first attempt in the United States to provide year-around navigation with a system of locks and dams on a meandering alluvial stream with a heavy annual sediment load and highly variable flow rates. Stabilizing the banks, developing a stable navigation channel and strategies for coping with the enormous sediment loads were the challenges she faced. Her responsibilities grew from designing individual local bank protection and stabilization projects to planning and designing a system of bank stabilization and channel alignment projects to complement the 14 lock and dam structures that would be constructed to provide more than 300 miles of navigable waterway through the state of Arkansas.

In 1964 Margaret left the Little Rock District for a brief assignment at WES where she was responsible for wave dynamics research on the effects of winds and tides on navigation in harbors, bays and estuaries. She then moved to the Corps Sacramento District as a project engineer for projects involving study of the development of shallow draft navigation on the Sacramento River above Sacramento and the feasibility of extending deep draft navigation from San Francisco Bay to Stockton. Upon retirement from the Corps in 1980, Margaret initiated a significant new career as an Associate Professor of Civil Engineering and Engineering Mechanics at the University of Arizona. She also documented her 30 years of government engineering experience in two books: "Water Resources Planning and Development" (1984) and "River Engineering" (1986), filling a void in the both the practitioner and academic literature.

Margaret Petersen's career accomplishments have been recognized by the following awards: Distinguished Member of ASCE; the ASCE Environmental and Water Resources Institute Lifetime Achievement Award; the ASCE Hunter Rouse Hydraulic Engineering Award; the Distinguished Alumni Award from the University of Iowa; membership in Chi Epsilon Civil Engineering Honor Society; and membership in Sigma Xi-the Scientific Research Society. Margaret Petersen presently lives in Tucson, Arizona.

Below are photos of awards being presented from the 2012 Hall of Fame/AOPOA/COE Navigation Conference: From Left, Paul Revis; Scott Robinson and Barbara Cummins, daughter of Jim Cummins; Augustine Fredrich and Keith Garrison; Paul Latture and Augustine Fredrich accepting on behalf of Margaret Petersen.

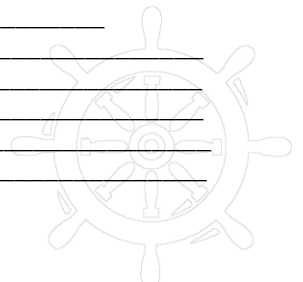


Clip & Mail the form below to become a supporter of waterway education & member of the Historical Society!

ARKANSAS RIVER HISTORICAL SOCIETY ----- MEMBERSHIP APPLICATION

5350 Cimarron Road • Catoosa, OK 74015-3027 • (918) 266-2291 • Fax: (918) 266-7678 • museum@tulsaport.com

MEMBERSHIP CATAGORIES: Name: _____
 Individual/Family \$25.00 Address: _____
 Corporate \$100.00 City/State/Zip: _____
 Lifetime \$1000.00 Company: _____
 Total Remittance: Home Telephone: _____ Fax: _____
 Membership: \$ _____ Business Telephone: _____ Fax: _____
 Additional E-mail address: _____
 Tax-Free Donation: \$ _____ Payment Enclosed Please Bill Me
 Total: \$ _____



Signature: _____