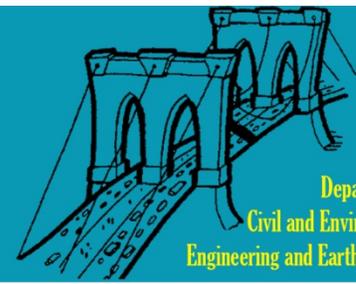


# Challenges and Innovations in Civil and Environmental Engineering and Earth Sciences

Spring 2013 Seminar Series



Department of  
Civil and Environmental  
Engineering and Earth Sciences

## Engineering in Sustainable Human Development: Challenges and Opportunities

**Joseph A. “Bud” Ahearn, NAE**

*Retired Senior Executive of CH2MHill*

*Retired Senior Civil Engineer U.S. Air Force*

*Founding Sponsor of Engineers Without Borders – USA*

**February 14, 2013**

**3:30pm-4:45pm**

**102 DeBartolo**

In the next two decades, almost two billion additional people are expected to populate the Earth, 95% of them in developing or underdeveloped countries. This growth will create unprecedented demands for energy, food, land, water, transportation, materials, waste disposal, earth moving, health care, environmental cleanup, telecommunication, and infrastructure. The role of engineers will be critical in fulfilling those demands at various scales, ranging from remote small communities to large urban areas, and mostly in the developing world. In particular, we need to train a new generation of engineers who could better meet the challenges of the developing world and address the needs of the most destitute people on our planet. As we enter the first half of the 21<sup>st</sup> century, the engineering profession must embrace a new mission statement—to contribute to the building of a more sustainable, stable, and equitable world.



Image from: planetmattersandmore.com



**Joseph A. “Bud” Ahearn is a recently retired senior executive of CH2MHill, where he was an executive leader in the engineering business lines of transportation, environment, water, industrial design, and related infrastructure. Prior to joining CH2MHill, Mr. Ahearn had a distinguished military career spanning three decades, where he achieved the rank of Major General in the U.S. Air Force and was responsible for shaping financial strategy, developing budgets, and executing infrastructure programs totaling more than \$7 billion annually. As the Senior Civil Engineer for the U.S. Air Force, he directed the operational readiness and natural disaster response of U.S. Air Force combat engineers and the development and operations of all U.S. air bases around the world. Mr. Ahearn is an active member of the National Academy of Construction (NAC), a Distinguished Member of the American Society of Civil Engineers (ASCE), a member of ASCE’s Industry Leaders Council (ILC), and past national president of the Society of American Military Engineers (SAME). Mr. Ahearn is dedicated to advancing engineering education and providing sustainable systems and services in both developed and developing countries. In 2010, he was inducted as a member of the National Academy of Engineers (NAE) for “contributions to improving the environment and transportation infrastructure through engineering and construction projects.”**