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**REDESIGNING THE URBAN NEIGHBORHOOD**

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**ABSTRACT:** There is no substitute for water in creating and sustaining thriving communities. How water is conserved, distributed, used, treated, and dispersed in communities can determine if there is enough to meet the demands of households, farms, industry and the environment. The United States' (US) water systems are some of the most well run in the world, yet they are wholly inadequate due to increasing demands and needed replacement. Public investment needs are staggering as the US continues to have an average annual shortfall of at least \$11 billion. The American Society of Civil Engineers (ASCE) 2009 Report Card for America's Infrastructure assessed the condition and capacity of our nation's public water works with an overall grade of D-. ASCE estimates that \$2.2 trillion is needed over a five-year period to bring the nation's water infrastructure to a good condition. While the establishment of a long-term community development, maintenance, and replacement plan must become a national priority, there is no time like the present for thoughtful, creative, transformational design. Our talk will focus on how decentralized non-potable supply projects can assist with rapid transformation to a sustainable water supply. By examining some of the first buildings in the United States to treat and reuse 100% of generated wastewater and/or greywater for non-potable supply. Several of the case studies presented have four to five (4-5) years of data and lessons learned to provide real life examples. By showcasing the true benefits or challenges, engineers, planners, utility managers, and regulators will have a unique perspective over how better to approach water sustainability. Included in our discussion will be the following projects:\*Desert Living Center - Las Vegas, NV: wastewater to toilet flushing supply\*Sidwell Friends School - Washington DC: wastewater to toilet flushing and cooling tower supply\*Tempe Transit Center - Tempe, AZ: greywater to irrigation / rain to toilet flushing supply\*Barrett Honors College at Arizona State University - Tempe, AZ: greywater to irrigation\*Omnilife Stadium – Guadalajara Mexico