

ABSTRACT

While new rainwater harvesting (RWH) products and systems are evolving beyond the simplistic rain barrel, the reasons for their implementation and adoption remain less defined. With hopes of better understanding these influences, a study was initiated to examine the relationship between RWH system incorporation in new projects and owners' reasons for inclusion.

Projects under construction or previously built that include above or below ground water capture and storage systems were targeted in Oklahoma, Texas and New Mexico due to typical arid climates between eight and forty-eight inches of annual rainfall. Factors influencing integration of RWH were determined from literature review and included in an online cross-sectional survey. Project owners were invited to complete a five level Likert scale to be used to rank the strength of influence of these factors: initial cost, perceived return on investment, government dollar incentives, geographical factors, product availability, available design and installation expertise, aesthetics, maintenance, education, social reluctance, legislation and regulations, marketing, storm water management, LEED and environmental concern.

The results show that rain water harvesting practitioners believe that implementation is due to an environmental ethic, rather than economic incentive or environmental regulation. Further discussed is the strength of influence for any type of building project (office buildings, schools) and building feature (rain water harvesting, LEED credit categories). This study contributes to a greater understanding of the influences associated with water conservation through integration of rainwater harvesting and reuses systems in new building construction projects.