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“The Effect of Normative Trends on Water Conservation”

### **Abstract**

Denver Water’s conservation plan aims to lower Colorado’s pre-drought water use twenty-two percent by 2016 (“Denver Water”, 2014). Recent communication campaigns have urged people to conserve water, but the effectiveness of these campaigns can be further increased by harnessing the powerful influence of group behavior. The effect of social norms on individual behavior has been frequently documented. Studies have reported that messages reporting behaviors as normative (i.e., commonly done) increases the likelihood others will perform these behaviors (see Cialdini & Goldstein, 2004; Goldstein & Mortensen, 2012 for reviews) and that this is more effective than appeals to help the environment. One study on the reuse of hotel towels found that reporting norms in which the majority of guests participate in towel reuse significantly increased individual participation (Goldstein, Cialdini, & Griskevicius, 2008) beyond just asking guests to help the environment. However, what has not been properly researched is the additional effect on behavior that can be had by providing information regarding changes in these norms, which may even further engender increases in conservation behavior. The research proposed herein seeks to research the effects of communicating changing trends in norms on conservation behavior. Culturally-based research has found that people from Western cultures tend to believe that change over time continues in the same direction, whereas people from Eastern cultures tend to believe that “what goes up must come down” (Alter & Kwan, 2009). Because Denver residents typically subscribe to Western style thinking, we hypothesized that communicating a norm for water conservation that is increasing (i.e., 63% engage in the behavior, and this is up from 52% the year before) would have a greater effect on water conservation behaviors than the norm alone (i.e., 63% engage in the behavior). To test this theory, we primed participants with conservation statistics and measured water use in a subsequent, ostensibly separate, experiment involving sampling toothpastes. As expected, it was found that communicating that the number of people conserving water was increasing led people to use significantly less water. The research proposed in this grant will seek to further advance this research in two ways: First, we will seek to conceptually replicate our previous research using a different conservation behavior. In our previous experiment, most participants were found to turn off the water while brushing their teeth, which makes further increasing this behavior difficult. Though our research overcame this limitation, we would like to use conserving water while hand-washing as a target behavior. We expect turning off the water while washing hands to be less common, and therefore more sensitive to social influence via social norms. Second, previous research had found that people may be more or less likely to perform behaviors depending on how many others participate (Schultz, Nolan, Cialdini, Goldstein & Griskevicius, 2007). Thus, people will be less likely to perform behaviors reported to be performed by a numerical minority. However, communicating that a minority is increasing may be able to overcome this problem. This would provide people wishing to promote a conservation behavior a way to leverage social norms even when most people do not engage in the behavior, as long as the minority engaging in it is sufficiently increasing.