Assessing the Social Suitability of Managed Aquifer Recharge Sites

*Margaret V. du Bray [1], Melissa Beresford[2], Laura Castro-Diaz[3], Jelena Jankovic-Rankovic[4], Jonathan Hallemeier[5], Amber Wutich[3], **Aubrey Harris**[6], Kyle McKay[7], Glen Low[8], and Daniel Siegel[8]*

[1]University of Northern Colorado, Greeley, CO USA
[2]San Jose State University, San Jose, CA USA
[3]Arizona State University, Tempe, AZ USA
[4]University of South Carolina, Columbia, SC USA
[5]U.S. Army Engineer Research and Development Center (ERDC), Brooklyn, NY USA
[6]U.S. Army Engineer Research and Development Center (ERDC), Albuquerque, NM USA
[7]U.S. Army Engineer Research and Development Center (ERDC), New York, NY USA
[8]The Earth Genome, San Francisco, CA USA

Managed Aquifer Recharge (MAR) is a method of taking excess available water to recharge declining aquifers. In addition to benefitting aquifer stability and long-term water storage, MAR is also proposed as an option for managing drought and floods, particularly in the high and low water years enabled by climate change. While MAR is well-understood in this capacity, what remains uncertain is the degree to which MAR will be accepted by and benefit or impact local stakeholders. This project is a collaborative effort between Earth Genome, the U.S. Army Corps, and researchers from Arizona State University.

Our goal is to develop a tool for assessing the social suitability of MAR sites by surveying the acceptability, perceptions, and knowledge of MAR among members of the Army Corps and stakeholders across the United States who could be impacted by and benefit from MAR. Here we present early findings from the Army Corps sample, as well as anticipated results from the stakeholders' sample. This method could be readily adapted for a particular community in the U.S., or could be adapted and used cross-culturally to achieve a better understanding of perceptions and knowledge of MAR. Our results will be used to a) further social science knowledge of MAR, and b) contribute to developing a tool that combines the physical and social suitability of MAR to help decision-makers find and develop MAR sites. In piloting this tool, we will communicate with a range of restoration managers, practitioners, and policy makers to better understand how the tool can help them in their decision-making.

Contact Information: Aubrey Harris PhD PE, USACE ERDC-EL, 4101 Jefferson Plz NE, Albuquerque, NM Phone: 505-342-3329, Email: Aubrey.e.harris@usace.army.mil