

**Metropolitan Domestic Water Improvement District  
Board of Directors Meeting**

**November 13, 2013**

**Update by United States Geological Survey  
on the Lower Cañada Del Oro Basin Aquifer Storage Monitoring Project**

**Synopsis**

The Metropolitan Domestic Water Improvement District (District) and the United States Geological Survey (USGS) have an agreement to monitor aquifer storage in the Lower Cañada Del Oro Basin. The three year contract expires on September 30, 2016. USGS staff will give their annual update on the project.

**Background**

The original purpose of the monitoring project was to determine areas favorable for artificial recharge of CAP water, and determine the volume of natural stream-flow infiltration to the aquifer from storm water events along the Lower Cañada Del Oro (CDO) Wash including mountain front recharge within the Lower CDO watershed. Since 2000, the project has helped evaluate the impacts on groundwater storage from long-term drought. As was presented by the USGS at the January 8, 2007 Board meeting, the data collected has aided in a better determination of the amount of groundwater losses (mining and drought) in the basin as compared to the Arizona Department of Water Resources' estimates.

**Issues**

The District, the Towns of Marana and Oro Valley, Pima County, Tucson Water, ADWR and the USGS are the project sponsors. Each sponsor annually contributes funds to total \$209,500. Metro's share is \$7,500 (3.6%), Marana at \$15,000 (7.2%), Oro Valley at \$15,000 (7.2%), Pima County at \$15,000 (7.2%), Tucson Water at \$34,000 (16.2%), ADWR at \$30,000 (14.3%) and USGS at \$93,000 (44.3%). The USGS invoices the District quarterly instead of annually and having a fiscal year from October 1<sup>st</sup> through September 30<sup>th</sup>. Payments are for work completed in the past quarter.

The USGS successfully merged in 2004 the CDO study into the larger Tucson/Avra Valley Basin aquifer storage change monitoring study. This expansion has benefited the District and the USGS. The District has access to the data collected within Town of Marana and City of Tucson. The USGS has benefited by having less administrative work and more time to conduct quality control and interpretation of the data.

The District, Marana and Oro Valley all participate in the funding of continuing the CDO sub-basin monitoring program and have found the project is valuable and informative to characterize long-term

recharge potential of the Cañada Del Oro Wash and to quantify the annual amount of groundwater mining in the watershed. The monitoring results have also assisted the District in assessing the impacts of Arizona drought conditions in the Lower CDO basin and the Metro Southwest service areas.

**Staff Recommendation**

Robert Carruth with the United States Geological Survey will update the Board of Directors on the FY2012/2013 monitoring results. Board members are encouraged to discuss the findings with Mr. Carruth and staff. No action is requested at this time.

Respectfully submitted,

Mark R. Stratton, P.E.  
General Manager