

PIMA COUNTY LOCAL DROUGHT IMPACT GROUP  
(LDIG)

Wednesday, May 11, 2016  
Pima County Public Works Building

**RECAP**

Attendance: Kathy Chavez (RWRD), Marie Light (PCDEQ), Rob Carruth (USGS), Candice Rupprecht (TW), Selso Villegas (TON-WRD), Eve Halper (Reclamation)

1. Welcome and Introductions -Welcome and Introductions were made
2. Updates – Kathy Chavez, RWRD
  - a. Recap March 9 meeting
  - b. Drought Status Maps-The April Short-Term Drought status map shows all of Arizona in some stage of drought reflecting dry conditions for the month. Southeast Arizona was downgraded from abnormally dry to moderate drought. The Long-Term Drought Status, covering January through March, 2016 also reflects winter precipitation below average. Most of the State is indicated abnormally dry
  - c. ADWR Interagency Coordinating Group is meeting May 17 in Phoenix. This group makes a recommendation to the Governor on whether to maintain the emergency drought declaration that has been in place since 1999
  - d. ADWR's drought coordination, Ruth Greenhouse, is retiring and her replacement is Einav Henenson
  - e. ADWR is holding a briefing on the Colorado River Shortage on May 18. It can be viewed at the Tucson CAP offices at Twin Peaks
3. Groundwater Storage and Land Subsidence in the TAMA – Rob Carruth, USGS, described the cooperation among Pima County, the major water providers and ADWR. After briefly outlining Arizona's water management regulatory structure, Rob described the USGS microgravity methods and monitoring stations used to monitor aquifer storage change and active areas of subsidence. These areas show a strong correlation with declining groundwater levels. In other states, drought conditions have resulted in increased groundwater withdrawals and subsidence.

Depending on the aquifer soil composition, some land surface compression can recover after groundwater pumping ceases. Other areas are not as elastic. For example, the central well field, where groundwater pumping has decreased with the introduction of CAP water, subsidence is still occurring in spite of recovering groundwater levels. Several graphs at various locations throughout the TAMA indicate water level changes and land surface compaction over time. Subsidence due to delayed drainage of fine-grained aquifer units can continue for years after groundwater pumping is reduced. Land surface elevation changes also correlate well with ADWR's InSAR monitoring.

Gravitimeters can also measure changes in gravity which can be used to monitor mass change over time or changes to aquifer storage. Over a two-year period, 2013 to 2015, aquifer storage in the TAMA decreased by about 100,000 acre-feet or about 0.3 feet per year. Negative changes in storage reflect groundwater pumping. Future considerations for the program include review of existing network and target areas of interest and continued collaboration with project

cooperators to use long-term datasets to improve our understanding of how alluvial aquifer systems responds to groundwater withdrawal.

4. Institute of Science for Global Policy Conference – Marie Light, PDEQ, explained the conference was held in February 2015 to develop methods of mitigation or adaptation to climate changes and to focus on personal lifestyle choices and collective decisions in a community. She described the conference format and outcomes.

Three speakers introduced key issues, followed by questions and debate. Caucuses were then used to identify areas of consensus and actionable next steps. The second day consisted of presentations on areas of consensus. Next steps were generally categorized into three areas; individual actions, community actions and regional/state actions

5. Adjournment and next meeting
  - a. Next LDIG meeting is Wednesday, July 13 and will include a presentation from Jeremy Wiess, U of A Climate and Geospatial Extension Scientist, on DroughtView which is being used to measure surface greenness from satellite data to show vegetation changes.
  - b. Selso Villegas announced the Tohono O’Odham Nation is preparing the first draft of its Climate Adaptation Plan. It is expected to be adopted in May 2017, after a comprehensive review and approval process
  - c. Meeting adjourned