PIMA COUNTY LOCAL DROUGHT IMPACT GROUP
(LDIG)
Wednesday, January 14, 2015
Pima County Public Works Building

RECAP

Attendance: Erin Boyle (NWS), Mead Meir (PAG), Kathy Chavez (RWRD), Selso Villegas, (TON), Evan Canfield (RFCD), Irene Ogata (COT)

1. Welcome and Introductions -Welcome and Introductions were made

2. Updates
   - Recap November 12
     - Cienega Creek Hydrologic Research and Findings-Drought impacts observed in vegetation and stream flow
     - Drought Observations on Pima County's Open Space Lands-drought impacts monitored as part of Pima County MSCP
   - Drought Status Maps
     - November drought status report reflects conditions drier than normal.
     - December drought status report shows some relief to several parts of the state,
   - Interagency Coordinating Group
     - November 13 meeting on review drought status
     - Recommended continuation of emergency drought declaration to the Governor
   - ADWR Annual Drought Report available on line
   - Pima County completed its quarterly drought update
   - NOAA held a drought workshop on January 8
   - The Cities of Tucson and Phoenix agreement for storage of CAP water
   - Higher snowpack may not be the single solution to the Colorado River drought; more concentration on demand water prices and use of long term storage credits

3. Drought Resiliency in the Urban Setting
   a. Urban Heat Island, Low Impact Development and City Green Streets – Irene Ogata, Urban Landscape Manager, City of Tucson
      - Climate change is expected to impact several sectors; city is focusing on heat threats to health. Heat stress is a recurrent health problem for urban residents and low income populations are most at risk
      - Tucson has addressed residential and commercial rainwater harvesting and is now focusing on using rainwater to create shade on city street landscaping to mitigate urban heat island effects without increasing outdoor potable water use

- Methods used to direct rainwater to street landscape include curb cuts, curb cores and curb slats
- Many projects are residential and driven by volunteers. Other projects include traffic round-a-bouts, parks and council offices. One project used pervious structured soil around the tree root zone
- The Tucson Department of Transportation adopted Active Practice Guidelines
- Projects have been implemented in residential streets and some collector streets; not yet arterial streets
- Tucson Water is evaluating whether the practices result in lower water demand. There is no data yet. If there is no decrease in water demand, at least the practices are increasing shade without using potable water
- Not clear how the benefits of passive rainwater harvesting can be quantified
- The National Weather Service does not issue heat warnings or alerts; this function should be implemented by the local health department. Maricopa County has a heat warning system
- The Tohono O'Odham Nation uses its community centers as cooling centers. They are also considering conducting an inventory of evaporative cooling units for residences. Schools are building community gardens and locating them to make use of stormwater runoff

b. Low Impact Development and Green Infrastructure Practices for Stormwater – Evan Canfield, Chief Hydrologist, Pima County Regional Flood Control District
   - The WISP study explored rainwater recharge versus rainwater capture
   - Rainwater capture in smaller watershed areas produce a better water yield
   - WISP Demand Goal #5 was to increase use of rainwater and stormwater to reduce demands on potable supplies
   - WISP Demand Management Action Item #7 was to develop design guidelines for neighborhood stormwater harvesting to encourage creation of habitat and water efficient landscapes
   - The City of Tucson and Pima County have collaborated on a Low Impact Development and Green Infrastructure Guidance Manual issued December 2014
   - Histogram of annual rainfall 1895 to 2000 versus number of years and histogram of daily rainfall 1895 to 2000 versus number of rainfall events indicate most of Tucson's rainfall is in small amounts
   - Type of roofing material impacts imperviousness
   - A literature review conducted of other rainwater harvesting practices
   - Low impact development provides the tools for harvesting, while green infrastructure provides the strategy
   - Autocase Beta Testing evaluated the benefits and costs of practices including swales, basins, cisterns, infiltration trenches and permeable pavements
   - Highest beneficial green infrastructure features include water harvesting basins/infiltration basins, xeriscape swales and infiltration trenches
   - For commercial sites the benefits outweigh the costs. The direct costs of water are small, but the larger benefits include reduced heat, air pollution reduction, better health and reduced carbon dioxide emissions
   - A low impact development workshop will be held April 9, 2015. The meeting announcement will be provided to LDIG

- The LID/GI Guidance Manual will be provided to the Board of Supervisors and will be part of the County's MS4 stormwater compliance

4. Adjournment – The next meeting is March 11, 2015. Presentation on winter season review and Colorado River status