



PIMA COUNTY
WASTEWATER RECLAMATION

PIMA COUNTY LOCAL DROUGHT IMPACT GROUP
(LDIG)

Wednesday, September 10, 2014
Pima County Public Works Building

RECAP

Attendance: Erin Boyle (NWS), Mitch Basefsky (CAP), Mead Meir (PAG)
Kathy Chavez (RWRD), Lilian von Rago (RWRD), Colby Bowser (RWRD),

1. Welcome and Introductions -Welcome and Introductions were made
2. Updates
 - Recap of July 9, 2014 LDIG meeting
 - Drought Status Maps: The August and September short term drought maps show most of Pima County is Drought Stage D1-Moderate. The long term map, published in August, reflects conditions for April, May and June. It shows most of Pima County in Drought Stage D2-Severe. The long term map will be updated in early November to show monsoon conditions of July , August and September
 - The Pima County Vulnerability Assessment and Drought Ordinance were approved by the Board of Supervisors on August 5. The draft ordinance includes a shift in recommended drought stages to better match the State’s Drought Status Report for drought intensity in Pima County. The Board also requested status reports on the local drought conditions and CAP water supplies. The reports are available on the [LDIG website](#)
 - Cienega Creek continues to show the impacts of sustained drought. Monitoring conducted in June, pre-monsoon, indicates the third year of record drought conditions including reduced stream flow length, less stream flow volume and decreasing groundwater levels. Pre-monsoon monitoring reveals conditions when the area is most stressed. Studies are being conducted on erosion. A more detailed presentation will be provided at the November LDIG meeting
3. 2014 Summer Monsoon Overview – Erin Boyle, National Weather Service
 - June was the 3rd hottest on record and there were 29 days of triple digit temperatures- the 2nd most. There was very little precipitation, but that is normal for June
 - July was the 13th warmest. Rainfall recorded at the airport was 1.43” which is below the normal of 2.25”

- August was the coolest since 2006 and the 8th straight August with below normal rainfall. Recorded rainfall was 1.89” which is below the normal of 2.39”. Rain gauges throughout Pima County varied from 0.90” to over 5”
 - As of September 9, rainfall at the airport was 2.14” which is above the monthly normal of 1.29”. Rain gauges have varied from 0.12” to 6.93”. Total rainfall at the airport for the 2014 water year, which ends September 30, is 9.12” while the normal is 10.83”. For the calendar year, the airport has received 6.07” which is over 2” shy of the normal, 8.44”
 - Tropical storm Norbert produced record rainfall at the airport of 1.84” and widespread flooding on September 8. The highest flows since 2007 were recorded in the Santa Cruz River, Rillito Wash and CDO Wash. A peak flow of 25,000 cubic feet per second was recorded at the Santa Cruz River and Valencia Road
 - Southern Arizona monsoon rainfall also exceeded the normal in Douglas, Nogales , Sierra Vista, Bisbee, Safford and Wilcox
 - The US monthly drought outlook calls for drought conditions to remain in Arizona with slight improvement in Southern Arizona
 - There are equal chances that temperatures in Arizona will be warmer or cooler this winter. There is a 60-65% chance that El Niño conditions will develop by winter. These conditions typically produce above normal precipitation
 - There is a tropical storm off the Mexican Pacific coast and a weather disturbance in the Eastern Pacific that could bring additional precipitation to Southern Arizona starting next week
4. Colorado River Outlook and Central Arizona Project Status – Mitch Basefsky, CAP.
- Review of the Colorado River Basin – seven US states and two Mexican states, 240,000 square miles
 - Ten major reservoirs serve 40 million people and 4 million acres of agricultural irrigation and produce 10,000 gigawatts per year of power
 - The two largest reservoirs, Lake Mead and Lake Powell, are at 39% capacity and 51% capacity, respectively
 - In August each year the Bureau of Reclamation prepares a projection of the elevation at Lake Mead on December 31. If the projected elevation is below 1075’ (above mean sea level), the Secretary of the Interior will declare a Tier One shortage. The projected elevation prepared recently estimates Lake Mead will be at an elevation of 1078’ in December 2014, therefore, no shortage will be declared in 2016. The probability of a shortage in 2017 is 36% and in 2018 the probability is 56%
 - Concerns about shortages in the Colorado River are being driven by a structural deficit in Lake Mead. Outflow from Lake Mead exceeds the inflow by 1.2 million acre-feet annually (maf). At this rate Lake Mead storage is declining by about 12 feet each year. Without corrective action and based on average snowpack in the Rocky Mountains, the elevation at Lake Mead could drop below the dead pool elevation of 1,000’ in five to eight years.

- The impact of reaching dead pool include
 - i. Nevada may be unable to withdraw its water
 - ii. Less than 4.5 maf will be left in storage at Lake Mead, leaving only 100,000 acre-feet for Arizona and Nevada if California takes its full 4.4 maf entitlement
 - iii. Diversions for CAP municipal and industrial uses and for Indian users will be reduce to zero. Lower priority users on the river will also have their deliveries cut
 - iv. Power generation and efficiency will be reduced at Hoover Dam
 - Options available to the Secretary of the Interior are:
 - i. Allow Lake Mead to continue falling below elevation 1,000'
 - ii. Take emergency action to protect elevation 1,000'
 - iii. Take proactive action to reduce the elevation dropping
 - The Secretary's options involve reductions to the amount of Colorado River water Arizona can take
 - It will take a number of years for Lake Mead's elevation to recover to pre-shortage elevations. Climate change projects increase the time it will take for Lake Mead to recover
 - Several adaption strategies are being evaluated including using banked water, conservation/efficiency and supply augmentation such as weather modification and desalination
 - CAP is taking several actions including
 - i. Working with ADWR and basin states on a drought response and sustainability plan
 - ii. Working with Arizona Colorado River users and CAP customers
 - iii. Outlining policy and cost implications with the CAP Board and stakeholders
 - iv. Preparing an implementation strategy
 - v. Basin state reports to the Secretary of the Interior
5. ADWR Draft Annual Report – The schedule for preparation of the annual drought report to the Governor includes LDIG reports to ADWR by late September, a draft in October and final report in November. A draft will be provided to LDIG in the next week for comment.
 6. Adjournment – The next meeting is November 12. Presentations on drought impacts to Cienega Creek and to Pima County Open Space Lands are planned.