



PIMA COUNTY LOCAL DROUGHT IMPACT GROUP

Wednesday, May 9, 2012

2:30 p.m.

Public Works Building
201 N Stone Avenue
3rd Floor Conference Room
Tucson AZ 85701

Attendance:	Kathy Chavez	RWRD	Karen Wilson	RWRD
	Daniel Ransom	Tucson Water	Fernando Molina	Tucson Water
	Becky Pallack	AZ Daily Star	Erin Boyle	NWS
	Jose Rosado	USDA-NRCS	Lillian von Rago	RWRD
	Carlos Joya	USDA-NRCS	Vicki France	Pima NRCD
	Mead Mier	PAG	Jim Washburne	UA-HWR
Speakers:	Ann Youberg	AZGS	Chris Smith	USGS
	Andy Wigg	RFCD		

1. Welcome & Introductions – Introductions were made.
2. Recap of March 14, 2012 LDIG meeting – K Chavez summarized the March 14th meeting noting that Zack Guido, CLIMAS, discussed weather factors that affect southern Arizona's climate and that Mitch Basefsky, CAP, talked about the state of the Colorado River.

K Chavez recapped ADWR's May 3, 2012 Drought Monitoring Technical Committee and the current Long-Term Drought map and how it has changed in the last three months (most watersheds have increased in drought severity by at least one step).

Kathy also noted that the Governor's Drought Interagency Coordination Meeting was scheduled for May 10, 2012, at the ADWR offices in Phoenix.

3. Geomorphic Responses of Burned Watersheds in the Modern Fire Regime: Floods, Debris Flows and Long-Term Recovery – Ann Youberg, AZ Geologic Survey

Ann, who was a member of the Burn Area Emergency Reaction (BAER) team last fire season, gave a first-hand account of the destruction produced by several wildland fires to the watershed hydrology, personal property and vegetation.

Fires in lower elevations typically burn hotter due to the open, park-like setting made up of mostly ponderosa pine and an herbaceous under growth.

Fires in higher elevations are typically crown-top fires – the vegetation is made up of taller canopy trees such as spruce and fir.

There seemed to be a hiatus of extreme wildland fires from the late 1990s and again from 2006 – 2010 and then a definite increase in the following years, perhaps due to the lengthening drought and it's decadal effect on Arizona's vegetation. Recent notable fires across the state have been

the Schultz Fire in 2010 and the Monument, Horseshoe 2 and Wallow Fires that occurred last year. Last year a million acres were burned.

Heavy or near normal rains keep potential fuels (grasses and trees) greener and less susceptible to burns while the lack of precipitation dries out the vegetation making it ready for a fire event.

Although not predicting what the fire season looks like this year, Ann did postulate that much of the heavy fuels that have accumulated over the drought years had already burned due to the large and intense fires Arizona experienced recently, that there may not be that much fuel around to stoke extreme fire events.

Wildland fire changes the hydrology of the area, increasing flooding and debris flows, and the area does not recover as readily. Severe fires also change the type of vegetation that returns to an area, not necessarily the cover that existed before the fire.

Fires are increasing in size and severity and hydrology of the burned area is significantly changed. Watersheds recover at different rates depending on the severity of the burn, vegetation recovery, ecosystem or riparian recovery and sediment deposits following a rain event.

4. USGS Involvement in Monitoring and Evaluation of Hazards from Recent Forest Fires in Arizona – Chris Smith., USGS

Chris Smith gave an overview of the gauges and gauging stations that USGS and others, particularly the National Weather Service (NWS), rely upon for information after the first precipitation incident following a wildland fire. The NWS uses data from nearly 4,000 stations to forecast river depth and flow conditions. This is important for public safety agencies where property and lives may be at risk or road closures may be necessary.

This data is also made available to the public on <http://waterdata.usgs.gov> and the Arizona Flood Warning System <http://data.afws.org/sui/frontPage.aspx>. Additionally, the public can sign up to receive alerts on their mobile phones or computers by registering at <http://water.usgs.gov/wateralert/>.

These sites and advancement in technology helps residents plan for the flooding that will occur after a fire has destroyed the plant cover and root systems in a watershed. In areas that have burned, a typical one to two year rainfall (a rainfall that occurs every year or two) might result in a 50- to 100-year runoff.

As quickly as possible and as funding allows, USGS and other organizations install rain and/or stream gauges in burned areas well before the fire has been contained. These monitoring sites are used for hazard warnings as well as scientific data collection. Timely deployment of the gauges is essential for the protection of threatened communities and for data collection from, hopefully, the first storm event.

5. Effects of the Aspen Fire on Pima County's ALERT System – Andy Wigg, RFCDD

The Aspen Fire (Mt. Lemmon/Summerhaven) that was human caused started in mid June in 2003. It was contained a month after burning close to 85,000 acres and destroying over 300 structures.

The majority of this high intensity fire was concentrated in the Cañada del Oro (CDO) watershed. Nearly 60% of the watershed burned and 20% was burned at a high intensity.

After a ½-inch to 1-inch of rainfall in the CDO watershed on August 1 and 14, 2003, runoff from the CDO watershed flowed directly into areas of developed Pima County. Flood flows at Golder Ranch Road were approximately 4,000 cfs (cubic foot per second = 7.48 gallons per second). After a larger rainfall on August 25, 2003, averaging between 1"-2" the resulting flood flow was about 6,000 – 7,000 cfs. Forty residences located within the floodplain in Catalina were evacuated. The previous high flows (1982 and 1993) were approximately 2,000 cfs.

The Pima County Regional Flood Control District's (RFCD) ALERT System provides quantifiable evidence of increased post-fire flood hazards. This data was used in the receipt of a FEMA Pre-Disaster Mitigation grant. The County was awarded \$3 million to purchase flood prone properties downstream of the burned CDO watershed.

6. Next LDIG Meeting – **Wednesday, July 11, 2012**, a round table discussion by the County's larger water providers on drought, drought impacts and their drought outreach messages.
7. Adjournment