



Pima County Local Drought Impact Group  
(Drought Monitoring Committee)  
Wednesday, January 11, 2012  
2:30 p.m.  
Pima County Public Works Building  
201 N Stone Avenue  
3<sup>rd</sup> Floor Conference Room

Attendance:	Kathy Chavez	RWRD	Karen Wilson	RWRD
	Kathleen Fanning	USDA-FSA	Debbie Hopkins	USDA-FSA
	Mitch Basefsky	CAP	Roberta Lopez-Suter	Tucson Water
	Marie Light	PCDEQ	Dan Hartley	Tohono O'odham
	Vicki France	Pima NRCD	Chris Smith	USGS
	Brandon Forbes	USGS	Nancy Selover	State Climatologist
	Erin Boyle	NWS	Claire Zucker	PAG
Speakers:	Saeid Tadayon	USGS	Patrick Bray	AZ Cattle Growers' Assoc.

1. Introductions and Updates – Introductions were made.
2. Recap of November 2, 2011 meeting – K Chavez summarized the November 2, 2011 meeting.

Brian Powell, Pima County's Office of Sustainability and Conservation, discussed his project mapping perennial water on the County's property. The goals of the project were to identify all permanent, unsupplemented water sources on open space properties and to protect the County's water rights at these sites.

The importance of drought impacts reporting was also discussed.

K Chavez reported the Interagency Coordinating Group had met in November and recommended to the Governor that the emergency drought declaration remain in place.

3. Arizona's Agriculture Water Use Program – Saeid Tadayon, United States Geological Survey

Mr. Tadayon, hydrologist, discussed Arizona's agricultural water use and the USGS program that tracks water uses outside of the Active Management Areas. USGS does not monitor water use within the State's five AMAs.

The major water issue in Arizona is the relationship between the quantity of water consumed and the long-term dependable supply.

Eighty-five percent of the State's water is used on agriculture. Agriculture, mining and livestock are key components of the State's economy. In 2010, the State's cash receipts were \$1.9 billion from agriculture, \$1.3 billion from livestock and in 2007, over \$7 billion from mining activities. As expected, these three industries, as well as rapid urban development, dominate water use in Arizona.

Agricultural water use declined in the 1980s but the economic value of crops went up, likely due to improved irrigation efficiencies and changes in plant genetics making some crops more drought-tolerant.

The current agricultural groundwater withdrawals are about the same as they were in the 1950s. The largest factor in the amount of water used is the price of the commodity. The higher the prices, more crops will be grown.

The USGS Water Use Program collects data from Arizona's counties every five years. This information is also used by ADWR for its water atlas reports. It has also been recommended that the information be used by the BOR (Bureau of Reclamation) in the Colorado River Basin Study.

Water use in non-AMA areas was estimated using the modified Blaney-Criddle equation since water use is usually not metered, although Safford now requires metering of groundwater withdrawals. The Blaney-Criddle water balance model is a calculation that takes into account temperature, precipitation, crop type and crop planting and harvesting dates.

The PowerPoint presentation *Arizona Water-Use Program* by Saeid Tadayon, Brandon Forbes and Dylan Cobean may be found on the County's LDIG page along with the recap of this meeting. [http://www.pima.gov/drought/LDIG/index\\_LDIG.html](http://www.pima.gov/drought/LDIG/index_LDIG.html)

4. Continuing Drought's Impact on Ranching – Patrick Bray, AZ Cattleman's Association

Mr. Bray, Executive Vice President, without the aid of a visual presentation, discussed the impacts from the continuing drought on the livestock and agricultural industries in Arizona and other southwestern states.

Arizona weathers drought better because we are, for the most part, prepared for drought and less reliant on rainfall. Drought has become the new "normal" for Arizona.

Much of the state's pastureland was lost in the 2011 summer fires (Wallow, Horseshoe, etc.). On August 16, 2011, the U.S. Department of Agriculture granted Governor Brewer's request to assign five counties as primary natural disaster areas due to losses caused by drought, wildfires and high winds: Apache, Cochise, Graham, Greenlee and Santa Cruz. Four counties - Gila, Navajo, Pima and Pinal - are named as contiguous disaster counties. A Secretarial disaster designation makes farm operators in both primary and contiguous disaster areas eligible to be considered for assistance from the Farm Service Agency (FSA).

Although the range grasses recover rapidly, United States Forest Service (USFS) policies do not allow grazing immediately after a fire incident. Additionally, there often is insufficient infrastructure remaining, such as fencing.

One of the adaptive ranching management strategies includes rotating herds so the range grasses are not depleted. One section of land (640 acres) can sustain eight head of cattle.

Arizona has many types of cattle – Herefords, Angus and Brahmas make up some of Arizona's cattle stock, but Brangus (Angus crossbred with Brahmas) work particularly well in this state. Arizona cattle are more drought-tolerant as they are more adept at finding shade and water. Ranchers build stock ponds for watering but feed is usually the greater constraint

Due to drought in several other states, particularly the Midwest, corn and hay prices are also higher so cows have not been taken to feedlots as in pre-drought years.

Weather patterns similar to last year are causing concern for the cattle industry. If winter weather drops off or ends early, there will be less grass for grazing. Most calves are fed a corn diet while their mothers graze the range.

Recent weather patterns are producing storms with greater intensity, but isolated precipitation, it is likely one ranch receives significant rainfall while a neighboring ranch receives none.

Adding to the crunch rancher's are facing is the fact that less alfalfa was planted after the cotton harvest and prices have consequently increased.

The state's cotton crop was harvested later than usual, during Christmas instead of around Thanksgiving. Cotton has a long growing season and is selling at very high prices, so farmers are growing cotton (better prices) instead of alfalfa. Alfalfa prices are expected to remain high adding an additional burden to ranchers and consequently, the consumer.

Texas and Oklahoma drought impacts started in April 2011 when ranchers began to send calves to market at 300 pounds rather than the usual 700 pounds. Several factors influenced this sell-off – no rainfall, unusually high feed prices and the cost to haul water. These states have more cattle stock – one billion head of cattle, compared to Arizona's one million head.

The lack of rangeland grasses throughout the southwest, due to drought and wildfire, has compounded the problem. Sale barns in Texas and Oklahoma that are usually closed in summer, were selling cattle in an effort to reduce ranchers' herds and therefore, expenses.

Although one would expect this to cause a glut of beef and decreased prices, it did not. From an international perspective, the weak US dollar has resulted in an increase in beef exports. The March 2011 tsunami in Japan also had a huge effect on US beef consumption.

What are the impacts of heat versus precipitation? Cattle are heat tolerant. One of the past year's constraints was farmers' running out of their water allotment before they could plant feed.

In feedlots, the continuing drought increased dust – roads and feedlots must be watered to keep the dust down to comply with air regulations.

Ranching and agriculture efficiencies are being driven more by private industry than academia. The future of food crops will go south to Mexico because labor is cheaper, unless mechanical methods for harvesting crops are developed.

The Fall 2011, Arizona Water Resource publication has an article *Through Dry Times* by Alanna Riggs on the effects of the drought on her family's sixth generation ranch, the 4Y in Dragoon, AZ. [http://ag.arizona.edu/AZWATER/awr/awr-pdfs/AWR\\_Fall\\_Newsletter\\_2011.pdf](http://ag.arizona.edu/AZWATER/awr/awr-pdfs/AWR_Fall_Newsletter_2011.pdf)

Drought affects agriculture and ranching in Pima County – education on the impacts of drought should be broadened to include more than the impacts to water providers.

5. Next LDIG Meeting – Wednesday, March 14, 2012.

6. Adjournment