Pima County Local Drought Impact Group
(Drought Monitoring Committee)
Thursday, March 24, 2011
10:00 a.m.
Pima Association of Governments

Attendance:	Kathy Chavez	RWRD	Linda Smith	Tucson Water
	Karen Wilson	RWRD	Tom Arnold	Tucson Water
	Gregg Garfin	CLIMAS	Dee Korich	Tucson Water
	Claire Zucker	PAG	Justin Manuel	Tohono O'odham Nation
	Mead Meir	PAG	Dan Hartley	Tohono O'odham Nation
	Chris Smith	USGS	Nancy Selover	State Climate Office
	Bruce Gungle	USGS	Kristen Egen	WSDA-NRCS
	Kelly Smith	NDMC	Debbie Hopkins	USDA Farm Bureau
	Melissa Widhalm	NDMC	Mike Crimmins	UA Cooperative Extension
	Mark Svoboda	NDMC	Glen Sampson	NWS
	Kelly Helm Smith	NDMC		

1. Introductions and Updates – Introductions were made. Kathy Chavez thanked PAG for hosting the meeting and recognized Gregg Garfin, Climate Assessment of the Southwest (CLIMAS) for organizing the meeting with the National Drought Mitigation Center.

2. Recap of January 19 meeting - K Chavez briefly summarized the January 19 meeting that included a presentation on drought history in the Southwest reconstructed from tree rings. The presentation is available on Pima County's Drought webpage. She also noted staff changes at ADWR. Ruth Greenhouse will now be the ADWR's liaison.

3. Meeting Goals – Gregg Garfin reviewed the goals of the meeting. The National Drought Mitigation Center (NDMC) helps people and institutions develop and implement measures to reduce societal vulnerability to drought. NDMC is based at the University of Nebraska-Lincoln and is collaborating with the University of Arizona on drought impacts and the importance of monitoring drought impacts. NDMC staff has been touring Arizona this week to learn about drought programs in Arizona. They have visited Kingman, ADWR and now, Pima County. Some of the NDMC goals are to learn:

   - What motivates communities to plan for drought?
   - What keeps communities focused on drought planning, monitoring, education and related activities?
   - What information do communities use for planning, monitoring and education?
   - What are the policy motivations for drought planning and related activities?
   - How well does our municipal drought plan work?
   - What are suggestions to improve municipal drought planning?

4. Drought Monitoring in Arizona and the U.S. –
   a. Overview of Drought - Kelly Helm Smith, reviewed the NDMC's approach to drought planning which includes impacts, physical signs to monitor (climate and hydrology) and knowing where to focus on planning efforts.

      Some reasons to plan for drought are to prevent property loss, protect ranch and farm-dependent income, protect wildlife habitat, protect tourism, reduce stress and provide greater resilience to drought and other hazards

      G Garfin asked for input on drought concerns in Pima County. They included:
      - Increased wildfire danger
      - Shortages to the Colorado River supply
      - Private wells drying up
      - Adverse impacts to wildlife
      - Combined effects of the winter freeze and ongoing drought
      - Increase food costs, such as beef

G Garfin reviewed the history of the Colorado River flow, which now extends from the year 725 through 2010, noting that droughts of greater severity and duration have been seen in the past based on tree ring research.

b. National Integrated Drought Information System – Mark Svoboda, NDMC, explained that the goals of the NDMC are to improve drought science, build awareness of the impacts, develop drought policy and implement planning. He reviewed the U.S. Drought Monitor noting that there are 269 partners that contribute to the development of the Drought Monitor which is updated weekly.

Drought intensity is expressed through five levels that are linked to percentiles. In the West the drought indicators are snow, monsoon intensity, reservoir levels and stream flow.

Different indicators are used in other areas. In areas where there are data gaps, other information used consists of estimated soil moisture, radar-estimated precipitation, and snow pack.

Many entities use the Drought Monitor; policy makers, media, agricultural committees in both the U.S House of Representatives and the Senate and local, state and federal agencies.

M Svoboda reviewed the National Integrated Drought Information System (NIDIS) which is an interagency drought system that builds on existing forecasting and assessment tools. NIDIS also provides information on drought planning, research, education, and recovery from drought. Information on NIDIS can be found at www.drought.gov

5. Impacts Monitoring – The following impact tools were described:

a. AzDrought Watch – Mike Crimmins reviewed the basic elements of AZ DroughtWatch, including why monitoring impacts are important and efforts to obtain more drought impact observations

b. CoCoRAHS – Nancy Selover, State Climatologist and ASU, reviewed how watershed precipitation data is used as a drought indicator. The Community Collaborative Rain, Hail and Snow Network (CoCoRAHS) consists of volunteer observer sites and automated sites that use standardized rain gauges to report precipitation. Additional monitoring sites would give the network more robust data in areas where precipitation data are scarce. Just as it is useful to record where there are no drought impacts, it is also useful to record where there is no precipitation.

c. U.S. Droughts Impacts Reporter – Melissa Widhalm, NDMC, reviewed the U.S. Drought Impact Reporter (DIR) reviewing why it is important to track drought impacts both nationally and locally. Physical drought differs from drought impacts. No single method exists for quantifying drought losses. Monitoring drought impacts provides an early warning mechanism to keep people engaged in communication, to inform planning activities and to reduce long-term vulnerability. The DIR is a searchable long-term online database used by multiple stakeholders such as the media, the public, decision makers, resource managers and federal, state and local agencies. The DIR coordinates with both CoCoRAHS and AZ DroughtWatch to get drought observations from Arizona.

d. Feedback on Drought Decision Tools and Monitoring – G Garfin led a discussion on how drought information is used by decisions makers, what motivates drought monitoring and what keeps stakeholders focused on drought management. Key observations were:

- One of the Tohono O'odham Nation's primary concerns is impacts on livestock
- Drought is not a large issue on the public's mind at the moment
- The large wildfires in 2004 and 2005 increased drought awareness. Much of that has waned because there have been no large wildfires recently. However, the lack of large

wildfires may be the result of improved forest management, not eased drought conditions

- There is no perceived public impact because water resource managers are doing a good job of continuing to provide reliable, uninterrupted water supplies
- Tucson's large aquifer is more resilient to drought and not impacted as much
- Communities are reluctant to issue drought declarations that could alarm the public
- The NDMC is holding a workshop June 8-9, in Chicago, focusing on how to engage communities. The workshop is entitled "2011 Building a Sustainable Network of Drought Communities. For information, see: http://go.unl.edu/epcflyer1
- Rural areas may be more vulnerable to drought and are more connected to land uses
- The severe drought in the Southeast spurred the Center for Disease Control's involvement to issue guidance for private well owners.

6. Next LDIG meeting May 11 – Proposed topics include an update to the Colorado River shortage, 2010/11 Winter Season Review and a review of drought declarations. The meeting will be held at the usual time and place.

7. Meeting was adjourned