**What is the Rainfall Roundup?**
The Arizona Rainfall Roundup is an ongoing effort to organize a cooperative volunteer rainfall monitoring network across Arizona. Data collected through this network is presently being used in drought monitoring programs at the county, state, and national level to help supplement existing precipitation observation networks. The monitoring network also provides an opportunity to integrate citizen scientists into a Cooperative Extension based climate science program.

**Why does Arizona need more rainfall data?**
Precipitation amounts are highly variable through space and time across Arizona due to topography and seasonal weather patterns. This is especially true during the summer monsoon season when thunderstorms can produce heavy rainfall events that are very localized.

**How does the Roundup work?**
This volunteer monitoring program has been designed to be low cost and allows for various levels of commitment. All volunteers need to participate is a rain gauge and access to the internet. Additional communication methods to report rainfall data for volunteers without internet access are presently being explored. These methods include a postage paid postcard that can be mailed in each month with rainfall data logged on it and a telephone data entry system. Volunteers are asked to provide monthly total rainfall measurements at a minimum, but are encouraged to provide weekly and daily totals if possible.

**Steps to Participate**
1.) Register to become a volunteer on the Roundup webpage. This includes a link to aid in identifying the latitude and longitude of your home address.
2.) Purchase a rain gauge. Resources on the website help describe the different types of rain gauges available and potential costs.
3.) Install the rain gauge. Instructions provided on the Roundup website describe an ideal rain gauge installation and potential pitfalls to avoid when installing a gauge.
4.) Track and report data. An online data submission form accepts both monthly and weekly totals. These totals are then tabulated into maps and reports available on the Roundup website.

**What has the Roundup done so far?**
Volunteer observations have been reported every month since July 2005 by close to 20 volunteers. Several new volunteers are signing up each month helping the network to grow. New volunteers are being solicited through existing University of Arizona Cooperative Extension programs like the Master Watershed Steward program.

**Data Quality and Volunteer Observations**
Volunteers provide high-quality observations that complement existing official precipitation monitoring networks like the National Weather Service Cooperative Observer Network. The chart above compares NWS Coop Observer data in Willcox, Arizona to a nearby Rainfall Roundup volunteer. Note that volunteers report additional observations to rainfall totals including unusual weather conditions, vegetation conditions, phenological observations, and local climatological information. This additional information is especially useful to managers and scientists for activities like drought planning and monitoring.

**Next Steps**
A next generation data reporting and visualization website is under development and new efforts to recruit volunteers are underway.

More information at
http://cals.arizona.edu/climate/proj/rr/

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