

Climate Tools for Water Managers

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Tracking Drought Impacts Across Arizona: Arizona DroughtWatch

Source: Arizona Cooperative Extension and Arizona Department of Water Resources

Access: azdroughtwatch.org.

Mike Crimmins – University of Arizona

Precipitation and streamflow observations are the primary variables used to track changes in drought conditions across a region, but the impacts from these conditions are more difficult to track. They can range from subtle changes in agricultural productivity to complex alterations that emerge in sensitive ecosystems. Tracking drought impacts in near-real time can help characterize drought conditions more accurately, allowing for more effective planning and response measures.

A state-level drought impact monitoring system, AZ DroughtWatch, has been developed in Arizona to support the Governor's Drought Task Force. The system collects data through a monthly drought-impact survey designed to capture information across multiple sectors and drought categories relevant to Arizona. Impact observations are made by registered users, which include county-level drought monitoring groups, agency field experts, and local volunteers. The impact survey consists of six main categories containing over 90 individual impacts. These include:

- *water resources and hydrology*, such as unusually low groundwater or reservoir levels or streamflow, or the need for new or deeper wells or supplemental water;
- *agricultural impacts*, such as soil erosion, stressed or dying plants, and unusual need for irrigation or supplemental water to meet irrigation needs;
- *livestock production and grazing land impacts*, such as unusually low range productivity, poor or lost

- forage, drought-related livestock mortality or reduced rate of fattening, and need for supplemental water sources to meet livestock demands;
- *societal and community impacts*, such as reduced property values due to lack of water resources or changes in landscape; unemployment, foreclosures, or business closures related to drought; need for supplemental water sources for public use;
- *tourism and recreation*, such as land and park closures due to lack of water or fire threat; reduced hunting, fishing, or camping due to low water levels or drought effects; and
- *ecological impacts* to plant communities, aquatic species, and wildlife, including plant and wildlife stress or death, fire, or habitat loss.

Additional supporting comments and digital photographs can be attached to each impact observation. Information collected in Arizona DroughtWatch will support the production of more accurate drought status maps for Arizona as well as local-level drought vulnerability studies.

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AZ DroughtWatch
Arizona's Drought Impact Reporting System

Home My DroughtWatch User Guide Register About AZ DroughtWatch

Drought Impacts: November-2008

Summary Reports

- County and watershed summary tables
- Detailed impact reports (requires registration and login)

Impacts Reported

- in 0 of 6 categories
- in 1 of 6 categories
- in 2 of 6 categories
- in 3 of 6 categories
- in 4 of 6 categories
- in 5 of 6 categories
- in 6 of 6 categories

Categories

- Water
- Agriculture
- Livestock
- Society
- Tourism
- Ecology

Watershed Abbreviations

AGFR	Agua Fria River-Lower Gila River
BILL	Bill Williams River
LGIL	Lower Gila River below Painted Rock Dam
LICR	Little Colorado River
LOCR	Lower Colorado River, Lees Ferry to LEES Lake Mead
LOCR-MEAD	Lower Colorado River below Lake Mead
LSJN	Lower San Juan River
MGIL	Middle Gila River (Local Drainage)
RASU	Rio Asuncion
RBAV	Rio Bavispe
RSON	Rio Sonoyta
SALT	Salt River
SCRZ	Santa Cruz River
SPED	San Pedro River
UGIL	Upper Gila River
UPCR	Upper Colorado River of Lake Powell Area
USJN	Upper San Juan River
VERD	Verde River

About AZ DroughtWatch

AZ DroughtWatch is a tool designed to collect qualitative reports of drought impacts across Arizona. This impact information is used in conjunction with meteorological and hydrological data to characterize drought conditions.

[Access recent drought status reports compiled by the Governor's Drought Task Force Monitoring Technical Committee](#)

[Find out more about AZ DroughtWatch](#)

Arizona Drought Links

- [AZ Dept. of Water Resources - Drought Program](#)
- [Rainlog Precipitation Monitoring Network](#)
- [U of A Climate Science Applications Program](#)
- [Climate Assessment for the Southwest](#)
- [AZ State Climate Office](#)
- [Arizona Climate Maps - Western Regional Climate Center](#)
- [National Integrated Drought Information System](#)
- [Western U.S. Weather and Climate - National Weather Service](#)

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The home page of AZ DroughtWatch, showing drought impacts in Arizona last November.