



United States  
Department of  
Agriculture

Forest  
Service

Tonto  
National  
Forest

2324 E. McDowell Rd.  
Phoenix, AZ 85006  
Phone: 602.225.5200  
Fax: 602.225.5295  
V/TTY: 602.225.5395

File Code: 2200-3/2520  
Route To:

Date: March 21, 2001

Subject: Rangeland Drought Policy

To: District Rangers

Enclosed is a copy of the Tonto National Forest Rangeland Drought Policy. It will take affect as of this date. This policy will provide guidance in defining and evaluating drought conditions on our rangelands. Its purpose is to help ensure that we address drought conditions in a timely manner and take appropriate actions to protect Forest resources.

The policy establishes a Forest Drought Team. It shall be the Team's responsibility to implement the drought policy. At this time, I am assigning the following individuals to the Drought Team: Dave Tubb, Linny Warren, Patti Fenner, Carol Engle, Elwood Burge, Art Wirtz, Mike Ross, Norm Ambos, Grant Loomis, Eddie Alford and Rich Martin. As conditions warrant, the composition of the team will be adjusted to include other individuals with the needed expertise or interest.

As we gain experience in the use of this policy, we will undoubtedly need to make refinements. This is appropriate and will be accomplished on an as needed basis.

This new policy, which has been developed over the past two years, represents another step in our continual efforts to do a better job of land stewardship.

/s/ Thomas J. Klabunde for  
KARL P. SIDERITS  
Forest Supervisor

Enclosure

cc: Drought Team Members  
Dave Stewart, Director of Rangeland Management, R-3  
Art Briggs, Director of Watershed & Air, R-3



## TONTO NATIONAL FOREST

### RANGELAND DROUGHT POLICY

Climate in the Southwestern United States is highly variable with periods of drought being a relatively common occurrence. Consequently, planning for drought is a necessary part of prudent resource management.

Drought has a pronounced impact on National Forest resources. Rangeland plants are dependent on soil moisture for survival and are usually affected by lack of precipitation early in the drought cycle. Lack of adequate soil moisture affects virtually every physiological process in plants often resulting in a loss of plant vigor, and in extreme cases, plant mortality. Droughts that result in a reduction of vegetative ground cover can lead to increased soil erosion, a loss of site productivity and degradation of water quality. Lack of adequate forage and available water negatively affects both wildlife and domestic livestock.

Livestock use can accentuate the effects of drought by further stressing forage plants and depleting limited water supplies. Management of livestock prior to, during, and after drought is extremely important in order to protect soils, long-term site productivity, water quality, wildlife and other Forest resources and activities.

**Policy.** Rangelands will be managed so as to protect soil, water and other Forest resources during and after drought. The following principles will be utilized in implementing this policy:

- Drought conditions will be evaluated systematically utilizing a consistent Forest-wide approach.
- Conservative stocking of rangelands at all times will be a fundamental strategy in reducing drought impacts.
- During drought, each grazing allotment will be considered on a case-by-case basis for purposes of specifying management actions needed to protect Forest resources.
- Rangelands will be managed so as to protect forage plants after a drought has ended. Usually this will entail rest for a minimum of one growing season after normal precipitation resumes. After extended or severe drought, two or more growing seasons rest may be required.

## **Procedures.**

Defining Drought. To respond to drought conditions in a timely and consistent manner, the Standardized Precipitation Index (SPI), shall be utilized to define drought. The SPI compares recent precipitation values to long-term historical norms to determine the dryness or wetness of a particular area. When the SPI for a particular Arizona Climate Division (as defined by NOAA) is at a value of  $-0.70$  or less (larger negative number) for a specific time period (usually 9 to 12 months as determined by the Forest Drought Team), that area of the Forest shall be considered to be in a drought. An SPI value of  $-0.70$  indicates that precipitation is approximately 50% of the long-term average amount. (Note: This definition of drought is much more stringent than the Society of Range Management's definition with states that drought is "...prolonged dry weather when precipitation is less than 75% of the average amount"). The severity of the drought shall be indicated by the size of the negative number, the larger the number the more severe the drought. The primary purpose of the drought index will be to initiate an evaluation of drought conditions by the Forest Drought Team.

Forest Drought Team. The Forest shall establish and maintain a team whose primary purpose shall be to assess drought conditions and make recommendations as to any management actions needed to protect Forest resources.

Composition of Team. The team shall consist of the District Range/Watershed Staff from each District, the Group Leaders for Biological Resources and Physical Resources, a District Ranger, Wildlife Biologist, Soil Scientist, and Hydrologist. Other individuals who express an interest will also be considered for inclusion on the team. The Group Leader for Physical Resources in consultation with the Forest Supervisor shall be responsible for specifying individual team members. The Forest Supervisor shall notify individuals of their membership on the Forest Drought Team in writing.

Drought Team Responsibilities. The Drought Team shall meet whenever the SPI for a Climate Division within the Forest declines to a value of  $-0.70$  or less, or when Team members feel that drought conditions have been reached (even though the SPI has not declined to a value of  $-0.70$ ). The Forest Hydrologist shall be responsible for tracking the SPI and notifying other team members when the threshold value of  $-0.70$  is equaled or exceeded. The Drought Team shall assemble and assess all available information relative to drought and rangeland conditions, and discuss needed actions.

If the Drought Team determines that drought conditions exist, potentially affected grazing permittees shall be notified in writing that an evaluation of drought effects on rangeland conditions is being conducted.

No later than three weeks after the determination is made that drought conditions exist, each allotment totally or partially within drought affected areas shall be assessed and a brief report written that 1) describes the current situation on the allotment and 2) recommends any management actions needed to protect Forest resources. Where field observations are needed to assess range conditions, the assessment will be considered as a high priority and Forest personnel shall be made available to assist. When considering the current situation on an individual grazing allotment, the Team shall consider such factors as: local precipitation data and departures from normal, current range conditions, current stocking levels, available water, and management intentions of the permittee.

Once the assessment is made, the Team shall forward their recommendations to the appropriate District Ranger(s) through the Forest supervisor. The District Ranger shall determine the actions necessary to implement the Team's recommendations and notify the Forest Supervisor prior to implementation. Permittee notification and subsequent administrative actions will be completed as directed in FSM 2200. It is imperative that management actions designed to minimize the effects of drought be implemented in a timely manner. In the case of livestock removal, it shall normally be accomplished within a maximum of 30 days after permittee notification. To the degree possible, timeframes allowed for the implementation of needed management actions shall be consistent throughout the Forest.

Throughout the drought, the Team shall meet periodically to reassess conditions and evaluate the need for further actions. The frequency of meetings shall be determined by the Team, but shall not exceed two months.

Conclusion of Drought. Drought periods shall end when the SPI for the last 12 months becomes positive. Even though precipitation has returned to normal, rangeland plants normally need more time to recover. The Team shall establish standards for re-stocking allotments that will ensure the protection of rangelands until proper recovery is complete. Generally, after normal precipitation resumes, re-stocking to full capacity shall not occur until after a minimum of one growing season of rest. In cases of prolonged or severe drought, two or more seasons of rest may be required prior to re-stocking. To the degree possible, timeframes for re-stocking rangelands shall be consistent Forest-wide. Restocking shall not occur until after concurrence of the Forest Supervisor.