



WESTERN DROUGHT

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Western regions of the United States continue to cope with the decimation caused by the lack of rain. Ted Robbins of KUAT in Tucson, Ariz., provides an update on the drought.

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TED ROBBINS: For John Whitney, the current drought has been devastating. It helped force him out of the ranching business.

JOHN WHITNEY: In 2000, we had to remove all because of the drought.

TED ROBBINS: Whitney is in a former pasture, one of the few green areas on his 150,000-acre grazing lot.

JOHN WHITNEY: The first year we took the cattle off, it was tough. But now... I still get emotional about it.

TED ROBBINS: Much of the West is in the sixth consecutive year of drought. This map shows how bad it was this year. Snow pack and stream runoff in the red areas were 30-70 percent below normal. The drought has contributed to devastating forest fires, increased ground water consumption, and agricultural failure. Water levels in large storage reservoirs along the Colorado River, Lake Powell, and Lake Mead are down record levels.

HERB GUENTHER: In the short term, we're short. In long term we'll be okay.

TED ROBBINS: Herb Guenther is director of the Arizona Department of Water Resources.

HERB GUENTHER: We're just going to have to ride it out and see what the climatologists bring to us year to year.

TED ROBBINS: So how can you say "we'll be okay in the long run"?

HERB GUENTHER: Well, I'm an optimist.

TED ROBBINS: Science tells a more cautionary tale. This is the University of Arizona's tree ring laboratory. Scientists like Dick Warren are looking at samples from trees all over the west-- in this case, chunks of wood from the ancient cliff dwellings at Mesa Verde National Park in Colorado. The wood contains clues as to how long the drought might last. That's because trees record climatic conditions for up to a thousand years.

THOMAS SWETNAM: When there's a lot of moisture, they grow a really fat ring, and then when there's a dry year, they grow a very narrow ring.

TED ROBBINS: Tom Swetnam is the lab's director.

THOMAS SWETNAM: And this tree was killed by the fire that burned Los Alamos in 2000, and you can see relatively narrow rings here on the outside. They're the droughts of the 1990s. And as you come back further, you come into the really wet period of the 1980s and 1970s.

TED ROBBINS: Look farther back-- much farther-- and you find that droughts lasting for decades are not unheard of. The so-called great drought of the late 1200s lasted 20 years. It may have caused the ancient peoples of the Southwest, the Anasazi, to disappear.

THOMAS SWETNAM: Then another drought that's kind of famous now among paleoclimatologists is the 1580s drought. 1580s. This was a great drought that extended from the California's to the Carolinas. And this century, the drought that's comparable to the 1580s, or almost as bad as the 1580s, was the 1950s drought, which really began in the late '40s and ran till about 1957. And it was an extraordinary drought. There was great stress in Arizona, New Mexico. Many ranchers went out of business. New Mexico was declared a disaster area by President Eisenhower. There was a lot of tree die-off, mortality of trees like we're seeing now; big forest fires.

TED ROBBINS: Mega-droughts seem to coincide with el Nino, or the Pacific decadal oscillation. That's the weather pattern that raises sea surface temperatures and pushes jet stream moisture away from the west. That evidence, combined with the new tree ring evidence, seems to suggest that the current drought is going to last a lot longer.

THOMAS SWETNAM: Based on the past, I would say the likelihood is that we'll be in drought for some more years. There's some possibility, probability of that that's greater than, you know, 50 percent I think, because the Pacific Ocean in that condition like it was during the 1950s.

TED ROBBINS: Adding to the problem is the fact that the West is much more populated these days than during past major droughts. This year, Arizona's governor appointed Herb Guenther to head a drought task force, the state's first.

TED ROBBINS: Why do you think that the state had not had a plan before now?

HERB GUENTHER: Well, if I were to guess, every time we start planning, putting together a drought plan, it starts to rain. And when it starts to rain, everybody packs up and goes home.

TED ROBBINS: The drought plan will identify places that need water immediately, even if it has to be trucked in, to limit damage from wild fires or damage to wildlife and agriculture. The plan will also look for ways to conserve water, or technology that might make limited supplies go farther if the drought indeed does last a decade.

DALLAS REIGLE: I'm pretty sure that we could not survive a drought of that length or that magnitude today. With the increased population, there's no way this society could withstand a drought of that duration.

TED ROBBINS: Dallas Reigle is with the Salt River Project, which, along with the Colorado River, provides most of the Phoenix area's water. This is the Salt River Project control room, where canal gates and water flows are regulated. Reigle says a decade-long drought would bring major societal change.

DALLAS REIGLE: I don't think we're looking at mass extinction, but I think you would see the elimination of water use outside the home. Nobody is going to be able to wash their cars. Nobody is going to be able to water their plants. It's going to be... water... the little amount of water that will be left will probably be reserved for human consumption.

TED ROBBINS: The city of Tucson already has de facto conservation. People who use more

water pay higher rates than people who use less. Tucson uses treated waste water to irrigate golf courses and public landscaping. But if the drought continues long enough and people keep moving here, deputy city water director Marie Peartree says Arizona and the rest of the West may be forced into the ultimate conservation measure: Reusing water for human consumption.

MARIE PEARTREE: You start looking at taking reclaimed water, which is already treated waste water, and treating it further, ultimately to potable standards. If the population keeps growing, that may be one of the water supplies that we have to look at.

TED ROBBINS: Some experts think a lack of water will be the limiting factor for western population growth. A long-term drought might hasten that process. But despite projections, no one really knows how long the current drought will last.

HERB GUENTHER: You know, your guess is as good as ours as to whether we are coming out of the drought or just entering in the front end of a mega-drought.

TED ROBBINS: It will take several years of above-average rainfall to end the western drought, which is why adequate planning and conservation seem so important, because drought is what scientists call a creeping disaster. Its effect builds slowly, year by year, and its end can be seen only in retrospect.

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