

Jenny Hoffner



## All Dried Up

Mitigating the effects of the U.S. drought on the drinking water supply

*From water supply shortages to declines in crop yield, the recent drought in the U.S. has affected almost every region of it. SWS Assistant Editor Williette Nyanue recently spoke with Jenny Hoffner, director of water supply for American Rivers, to discuss the implications of the drought and ways to preserve water supplies.*

**Williette Nyanue:** What is the complete context of the drought in the U.S.?

**Jenny Hoffner:** This summer, the U.S. has seen and felt the impacts of one of the worst droughts in the last 50 years. As of late August, more than 62% of the country was experiencing moderate to exceptional drought. While the most extreme effects have been felt in the middle of the country, regions typically associated with wet weather also felt the heat.

The Great Lakes region has experienced unusually high temperatures and drought conditions this summer. Our largest source of freshwater, and related rivers and streams, experienced increased water temperatures and lowered water levels. Warm water temperatures are breeding grounds for algal blooms—a human public health risk and possible detriment to cold water fish.

After record-breaking fires blazed across the Rocky Mountain West, it is now experiencing a serious water supply shortage. The two main reservoirs along the Colorado River—Lakes Powell and Mead—are at 64% of their capacity, and the prospect of continued drought threatens the area.

In the Corn Belt, farmers have been hit hard due to significantly lower crop yields, which are predicted to push up crop prices and potentially increase food prices.

In the Southeast, the state of Georgia put a moratorium on agricultural withdrawal permits in the lower Flint and Chattahoochee basins due to prolonged

drought conditions and extremely low river flows.

**Nyanue:** What is the relationship of rivers to the drought and drinking water supplies?

**Hoffner:** Nearly two-thirds of water supplies in the U.S. come from surface water sources, mostly rivers. This water is finite. With the competing demands for river water—including power production, agriculture, industrial uses and drinking water supplies—many rivers are running low, and some are even running dry. Add increasing urbanization, associated impervious surfaces and lack of water returned through the soil as base flows, and rivers are in increasingly bad shape.

There are limits to how much water can be extracted from a river under normal conditions. With climate change models predicting more frequent and extreme drought in the future, communities across the country must come to grips with the challenges of securing reliable and predictable clean water supplies.

**Nyanue:** What are the best ways to address water shortages?

**Hoffner:** Communities need to adopt 21<sup>st</sup>-century solutions to water supply and drought. There are proven, reliable and cost-effective strategies that make our communities and rivers more resilient in the face of extreme and frequent drought.

Protecting and restoring the water cycle provides hidden reservoirs that sustain water supplies in times of low or

no precipitation. Protecting watersheds, using green roofs and rain gardens in urban areas, and natural floodplain management allow water to soak back into the ground and into critical recharge and source water areas.

Reducing water demand and the need to extract water will increase the time communities, businesses and farms can be sustained on existing supplies. Implementing water efficiency measures stretches supplies and turns water waste into water supply, and leaves more water in rivers and aquifers for downstream communities, fish and wildlife.

Optimizing existing infrastructure and supplies by reusing and recycling water, fixing leaky pipes, adjusting the timing of withdrawals, upgrading and retrofitting irrigation systems, reallocating reservoir storage and reoperating existing dams can cost-effectively provide a buffer against the effects of drought and establish more secure water supplies.

Drought often causes a great deal of conflict; rather than argue over who has what claim, it is critical to develop solutions that we all can live with. SWS

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