



Verde Watershed

# Currents

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## *The Verde River — Jewel of the Southwest: Proposed Upper Verde Wild & Scenic River*



Wild river segment at baseflow below Duff Spring

On Saturday, a cold windy overcast February day, eight of us are hiking along the upper Verde River. Now is the brown season – the green season begins in May – and it is beautiful. Four juvenile and two mature eagles circle overhead. A red-tail hawk cries and flees; native fish flash for cover. On a quiet terrace overlooking the river we discover a rock-art panel and an ancient campsite where Apache and Yavapai people once lived in harmony with natural rhythms.

Two million years old, the upper Verde River still flows through the desert highlands, through the Verde Valley, destined to join the Salt River east of

Scottsdale. Originating from clear, cool springs near Paulden, it flows freely through fifty miles of wild canyons in the Prescott National Forest, touched only by one road. Below Clarkdale, the Verde becomes an urban river, surrounded by homes and towns, spanned by highway bridges, and tapped for irrigation water. Below Beasley Flat, the Verde Wild and Scenic River courses through another fifty miles of rugged wilderness before being captured by Horseshoe Dam, there diverted into the municipal water supply for a third of metropolitan Phoenix.

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## Ecological Value

Today, the Verde River is the last of the perennial, free flowing, pristine rivers in Arizona and the southwest. The Verde's banks comprise a large portion of what riparian area is left in the state. Although the Verde River watershed comprises just 5.8 percent of the land area in Arizona, it supports an astonishingly large fraction of Arizona's vertebrate species: 78 percent of breeding birds species, 89 percent of bats and carnivore species, 83 percent of native ungulate species, 76 percent of reptiles and amphibian genera — an impressive concentration of wildlife. The Verde River, the lifeblood of the watershed, is essential life support for most of Arizona's wildlife species, including fish and birds protected by the Endangered Species Act and a rich and diverse variety of plants, animals, and fish. The Verde is a green artery pulsing through the heart of Arizona.

The upper Verde River, from the headwaters at Sullivan Dam extending downstream to Clarkdale, is critically important to the ecological diversity of the watershed. Although species diversity is similar to the watershed as a whole, the upper Verde River flows through undeveloped public lands, so the water quantity and quality is unaffected by diversions and urban activity. Ecologists especially value the headwaters of rivers as prime, pristine habitat.

The upper river segment is especially and uniquely favorable for restoration of native fish populations, and is the last best chance in Arizona according to noted native fish biologist Dr. John Rinne. Of the 14 native fish species naturally present in the upper Verde, only three are commonly found: the Sonora sucker, desert sucker, and roundtail chub are listed as species of interest. Two more are rarely found; the spikedace and razorback sucker are listed as threatened by the Endangered Species Act and are assigned critical habitat in the upper Verde. Nine native species are missing.

## Cultural & Historical Value

The entire upper Verde River corridor is laced with ancient rock art, campsites, structures, and artifacts revealing the historical lifestyle of Native Americans. The river and its springs today remain an essential spiritual and cultural foundation for the Yavapai-Apache Nation. Additionally, historical corrals and homesteads recall the lives of early Arizona ranchers, miners, and settlers.

## Recreational Value

The upper Verde is a wonderful place for people to hike, hunt, fish, camp, backpack, kayak, canoe, view wildlife, photograph, ride horses, and observe birds. The Sierra Club ([www.arizona.sierraclub.org/yavapai](http://www.arizona.sierraclub.org/yavapai)) guides a series

of five separate popular day hikes that cover the river from Verde Springs to Sycamore Creek.

## Threats

The Verde River is more important to us, and more threatened by us than ever before. Destructive recreation by careless campers and illegal off highway vehicle trespassers threaten the riparian values along the river; improved river management can easily fix these problems.

Non-native fish, introduced in previous decades both accidentally and purposefully for mosquito control and for sport fishing, have severely damaged native fish populations.

Road crossings (proposed, currently withdrawn) would fragment and degrade habitat.

The most serious threat is that unrestrained groundwater mining in the Big Chino Aquifer (BCA), which supplies 80-86% of the upper Verde base flow will convert the first 25 river miles to a dry wash, eliminating much of the aquatic life and degrading the present rich riparian habitat.

## Protection by Wild and Scenic Designation

To protect our river, a local citizens group is now asking Congress to designate the Upper Verde Wild and Scenic River (UVWSR). The goal of the proposal is "to protect the upper Verde River to the maximum extent authorized by the Wild and Scenic Rivers Act while respecting private property rights, ranching operations, and existing water users." The UVWSR boundaries are carefully designed to minimize interference with ranching operations and private property. Input from the river managers, from the public, and especially from ranchers is welcome: email [uvwsr@cableone.net](mailto:uvwsr@cableone.net).

Essentially, we propose that the Upper Verde Wild and Scenic River include 48.6 total miles of river approximately extending from Stillman Lake to the Prescott National Forest southern boundary upstream of Clarkdale, including four miles of lower Sycamore Creek and 1.6 miles of lower Granite Creek, to protect seven Outstandingly Remarkable Values (ORVs): Fish, Wildlife, Scenery, Geology, Recreation, Ecology, and Historical/Cultural. Once designated, federal law requires that the river be managed to protect the ORVs using a Comprehensive Resource Management Plan (CRMP). Prescott National Forest must prepare the CRMP within three years, incorporating broad public input, allowing citizens a voice in the river management. The CRMP is a significant and important protection for the upper Verde.

## Water Resource Issues

The most common question is "will this stop the pipeline?" Our proposal is not a response to Prescott's pipeline project, and a UVWSR will not guarantee maintenance of the river's current base flow. Congress did not intend

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the WSRA to resolve water resource issues; the WSRA pointedly defers to and claims no exemption from state water laws. Although a federal instream flow right is created vesting on the date of Congressional designation, that federal right is subject to the state surface water appropriation system. Therefore, all existing surface and groundwater rights, both upstream and downstream, would not be affected by WSR designation. In limited circumstances, the UVWSR may potentially constrain future, lower priority, large water withdrawals, but no existing water rights will be constrained.

Although the managers of the UVWSR are required to protect the ORVs, which largely depend on a free flowing river, they are given only limited tools to restrict water diversions occurring outside of the designated boundary area. The federal government may purchase water rights from willing sellers, negotiate or develop cooperative or voluntary water flow management agreements, and participate in regional water basin planning processes.

### **Protection from Groundwater Overdrafts**

The proposed pipeline to transfer water from the Big Chino Aquifer to Prescott and Prescott Valley is a topic of great concern to local citizens. Prescott is now authorized to withdraw and transfer over 8,000 acre-feet per annum (afa) from the Big Chino Water Ranch 15 miles northwest of Paulden, plus an additional 3,600 afa of wa-

ter previously used on historically irrigated acreage (HIA). But the problem is far, far bigger than the pipeline! Chino Valley has rights to transfer 3,500 afa, plus there are 3,500 afa of unclaimed HIA rights that will likely be purchased and transferred. Growing numbers of Paulden residents will consume more water through domestic wells. Large ranches in the area have rights to use many tens of thousands of afa. The total potential water demand in the BCA could consume the current base flow four times over. Given Arizona's antiquated water laws that neither acknowledge the intimate connection between groundwater and surface water nor provide tools for the protection of perennial rivers, this is an extremely difficult problem. Hydrologic science is clear that, unless groundwater pumping is restrained, the upper Verde will become a dry wash (think about the dust devils blowing sand around the Santa Cruz River near Tucson).

The proposed Upper Verde Wild and Scenic River will protect the ORVs in the river – a great step forward. The CRMP will insure more consistent and attentive management to protect the habitat from destructive recreation, to support wildlife, and to restore the native fishery. Road crossings would be restricted. WSR status cannot fully protect the upper Verde; balancing regional water demands and resources is a difficult task that may require decades of effort.

Our Verde River, a jewel of the southwest, is deeply threatened; an impressive array of citizens and groups are working to protect it, and it is not yet too late. Please join us.  
*by Gary Beverly, gbverde@cableone.net*

## **WET WINTER IN THE VERDE WATERSHED**

Climate indicators this past fall and winter all hinted to a potential wet and productive winter for the Verde watershed; although, recent years have cast some doubt on the predictive nature of these indicators. Some hope was obtained as Equatorial sea surface temperatures soared in the fall producing a moderate to strong El Niño event. December responded favorably with above normal precipitation and by January, the hope of wetter conditions for the season was confirmed. The appropriate weather patterns were in place for moisture-rich storms to frequently enter Arizona. January was well above normal and the most productive month of the season, with the third week of the month going down on the record books as the wettest 5-day period on record, by over an inch. February and March both fell into the normal category for precipitation and for the entire winter (December through March),

the Verde watershed received 12.76 inches of precipitation, which is 170 percent of normal. In addition to the well-above normal precipitation, each storm system that passed through AZ brought snow to relatively low elevations. In turn, snow conditions on the Verde watershed were at or just shy of record levels.

The wet winter combined with near record snow conditions proved favorable for significant run off into the Verde Reservoir System. So far, every month of the season (Jan-Mar) has recorded above normal flows. In addition, snowmelt run off on the Verde peaked in mid-March, but still remains high. The Verde reservoirs have been effectively full since the late January precipitation event; as a result, over 200,000 acre-feet of water have been spilled out of the Verde system in 2010. *Courtesy of Salt River Project*

## PRESCOTT, PRESCOTT VALLEY, AND SALT RIVER PROJECT AGREE TO SEEK COOPERATION IN IMPORTATION OF BIG CHINO WATER AND PROTECTION OF THE UPPER VERDE RIVER

The City of Prescott and Town of Prescott Valley (the communities), in a joint council meeting on February 11, 2010, approved a ground-breaking Agreement-in-Principle with the Salt River Project to table certain current litigation and Public Records Acts Requests among the parties as long as this agreement in principle is in effect and to seek agreement on issues related to the importation to the Prescott Active Management Area of groundwater from the Big Chino Water Ranch and protection of stream flow in the upper Verde River. "...this agreement is intended to create a conceptual framework setting out the principles which will guide the Parties and form the basis for future agreements between the Parties which the Parties contemplate at this time".

Major issues under consideration for cooperation include:

"...obtaining a legislative amendment to ARS §45-555(E) during the current legislative session. This statute will be amended to: 1) settle the quantification of water which may be withdrawn from the Big Chino Sub-Basin by Prescott...; 2) modify the exemption to remove any argument that this statute is an unconstitutional special law; and 3) make clear that any water imported into the Prescott Active Management Area ('PrAMA') by Prescott may be delivered for use anywhere within the PrAMA". As reported in the Daily Courier on April 2, the legislative amendment is progressing through both chambers of the Arizona legislature as House Bill 2561, sponsored by Rep. Lucy Mason, and Senate Bill 1445, sponsored by Sen. Steve Pierce. Committees have approved both bills.

"The Communities agree that in the event the withdrawal of water from the Big Chino Sub-Basin is negatively affecting the minimum flow of water in the Upper Verde River, they will mitigate such impact proportionately to the extent of the effect of their combined withdrawals on the Upper Verde River as compared to the effect of the withdrawals by other water users in the Big Chino aquifer".

"The Communities...agree to participate with SRP, ADWR, and the United States Geologic Survey ("USGS") in the funding and implementation of [as previously established] Big Chino Sub-Basin Monitoring Plan...and to participate with SRP, ADWR, and the USGS in the funding, creation, and implementation of a Big Chino Sub-Basin Groundwater Model...".

"SRP, Prescott and Prescott Valley will agree to the quantities of water identified by the Final Decision and Order of the ADWR Director for purposes of preparing the [above-mentioned] legislative amendment...".

"...SRP, Prescott and Prescott Valley agree that it shall not change the quantity of water to be clarified in the [above-

mentioned] legislative amendment...[and] SRP will not object to withdrawal from the Big Chino Water Ranch and transport of HIA [Historically Irrigated Acreage] water which may be presently owned or acquired in the future by Prescott, Prescott Valley or the Communities or otherwise transported by Prescott in its pipeline, pursuant to state law".

"The Parties additionally agree to work cooperatively and in good faith to resolve and reach agreement on the following related items:

(1) Withdrawal of any and all objections to, and recognition by SRP of, the "Intergovernmental Agreement for the Sale of Water and Cost Participation" between Prescott and Prescott Valley dated December 7, 2004...

(2) Confirmation of certain water rights of Prescott, Prescott Valley, and SRP, and agreement not to object to said water rights to be listed henceforth as an attachment to this Agreement.

(3) Creation and implementation of one or several water management, replenishment, or augmentation areas, districts, or other mechanisms to benefit the Big Chino Sub-Basin, to include working to establish a quantity cap for groundwater withdrawals from the Big Chino aquifer, and seeking the participation of owners of property and rights to HIA water within the Big Chino Sub-Basin.

(4) Measures for protecting the Upper Verde River which may include mitigation triggers and actions.

(5) 'Wild and Scenic' designation for the headwaters of the Verde River and maintaining a minimum in-stream flow".

Summary prepared by Ed Wolfe



# Yavapai County Water Advisory Committee (WAC) Update

The Yavapai County Water Advisory Committee (WAC) member communities recently signified their dedication to water-resource information and planning by agreeing to maintain their current funding levels to the WAC despite the difficult economic issues they face. This action will allow priority projects to continue. In addition to ongoing data collection, the high priority projects include: the Central Yavapai Highlands Water Resource Management Study (CYHWRMS) with The Arizona Department of Water Resources (ADWR) and U.S. Bureau of Reclamation; continuation by NAU of phase 3 of the surface-water model for the Verde Valley system; and the anticipated completion of the USGS Northern Arizona Regional Groundwater Flow Model including a set of model runs with future pumping scenarios. In addition, the WAC will continue to fund water education through Arizona Project WET and Yavapai County Cooperative Extension.

The first phase of the CYHWRMS study has been completed and the Demand Analysis Table and supporting documentation are complete and posted to the WAC website (<http://www.co.yavapai.az.us/Content.aspx?id=20562>). Phase 2 of the CYHWRMS is a water supply assessment to characterize water resources that could be included into various water-supply portfolios to meet different combinations of 2050 water demands within the study-area basins. The Technical Working Group is constructing a master table with the potential sources of water including location, type, availability, quality, and other comments. The second phase will be followed by development of alternatives to meet future demands.

The WAC is hopeful that surface-water monitoring will continue and the results of the NAU surface-water model-

ing work on the Verde River will be incorporated into the USGS regional groundwater model. The Model Report for the current USGS Northern Arizona Regional Groundwater Flow Model is in the publication process. It is anticipated to be available to the public by late spring or summer 2010. The WAC has prepared a set of scenarios for the model that will investigate a range of groundwater pumping conditions in the Big Chino, Little Chino and Verde Valley areas. The results of these model runs should be available this year and will be reported to the WAC. Other future scenarios may be developed based on the results of the first model runs and results of the CYHWRMS.

The WAC recently received an update on water-education activities from Edessa Carr of the UA Yavapai County Cooperative Extension office. The presentation highlighted both youth and adult education. More than 2,500 students and 450 adults were directly involved in these programs; and even more through the help of trained volunteers. The WAC is supportive of Project WET (K-12) curricula and the adult programs offered by Cooperative Extension. A 2009 summary report has been prepared and additional information and resources are available at the Extension office and on their websites (<http://ag.arizona.edu/yavapai/> and <http://ag.arizona.edu/arizonawet/>)

Please contact the WAC Coordinator, John Rasmussen, for meeting dates, details on any of the WAC activities or if you would like to be added to the WAC email-recipient list ([john.rasmussen@co.yavapai.az.us](mailto:john.rasmussen@co.yavapai.az.us) or 928-442-5199).

*Prepared by John Rasmussen, Coordinator, Yavapai County Water Advisory Committee*

## Membership Form for the Verde Watershed Association

Government units	\$ 100 per year
Business for profit	100 per year
Civic groups and non-profits	50 per year
Individuals	25 per year

Make check payable and mail to:  
**Verde Watershed Association**  
**P.O. Box 4001**  
**Cottonwood, AZ 86326**

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