



Verde Watershed

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...Senator McCain to meet with members of the Arizona congressional delegation—specifically named were Senator John Kyl and Representative Ann Kirkpatrick—to discuss obtaining federal funds for USGS work in support of the (Verde River Basin) Partnership's hydrologic mandate.

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Verde River Greenway Expands Downstream and Saves 3/4 More Miles of the River!



View, looking downstream, of the Verde River and the valley floor on the Rockin River Ranch. Photo courtesy of The Nature Conservancy.

The Arizona State Parks Board in partnership with The Nature Conservancy recently purchased the Rockin River Ranch. This purchase expanded the Verde River Greenway, adding 3/4 more river miles and a 209-acre protected area that serves as the Greenway's new downstream anchor, located in Camp Verde, just upstream of the congressionally designated Wild & Scenic River boundary on National Forest lands at Beasley Flat. It supports excellent natural values: an expansive mesquite bosque that links the Prescott and Coconino National Forests and provides an important travelway for native wildlife, healthy cottonwood-willow forest along the river corridor, and a

perennially flowing stretch of river that supports a variety of native fish and riparian-dependant species. It is within the territory for a nesting pair of desert bald eagles and is designated as Critical Habitat for several endangered species - southwestern willow flycatcher and razorback sucker. Additionally, groundwater rights and significant senior surface-water rights were included, providing additional opportunities to work towards maintaining flow in the river.

The new downstream anchor for the Greenway was acquired using funds designated by voters for land and water acquisition through the Arizona Heritage Fund ("Your Lotto Dollars at Work").

(Cont'd on Pg 6)

SENATOR McCAIN MEETS WITH VERDE RIVER BASIN PARTNERHSIP COORDINATING COMMITTEE AND VERDE VALLEY OFFICIALS

In the week before Christmas, Senator McCain requested a meeting in Prescott with 10 to 15 representatives of the Verde River Basin Partnership and Verde Valley mayors to discuss the status and future of the Verde River Basin Partnership. The Partnership's Coordinating Committee was represented by Chair and Clarkdale Mayor Doug Von Gausig, Vice-chair Bob Luzius of Prescott, Cottonwood Mayor Diane Joens, former Sedona Mayor Dick Ellis, Communications Chair Dorothy O'Brien, and Technical Advisory Group Chair Ed Wolfe. Additional attendees were Mayor Tony Gioia of Camp Verde, Mayor Rob Adams of Sedona, Yavapai County Supervisor Chip Davis, Jane Moore representing Jerome Mayor Palmieri, U.S. Geological Survey Arizona Water Science Center Associate Director Jim Leenhouts. Prescott Mayor Jack Wilson and Prescott Council Member Bob Roecker also attended.

The meeting included a review of the Partnership (see below) and a commitment from Senator McCain to meet with members of the Arizona congressional delegation—specifically named were Senator John Kyl and Representative Ann Kirkpatrick—to discuss obtaining federal funds for USGS work in support of the Partnership's hydrologic mandate. In addition, Senator McCain strongly emphasized his concern for preserving the vitality of the Verde River. The Partnership specifically requested (1) that the authorizing legislation, Title II (see below), be amended to extend its life in accord with a starting date contingent on commitment of federal funding in FY-10; and (2) that the estimated budget for four years of work by the USGS in support of the Partnership's commitments under Title II be adjusted upward by about 7 percent to \$5.16M to account for increased costs since December, 2006, when the hydrologic science plan was created.

Establishment, Purpose, and Structure of the Partnership:

The Partnership was authorized in November 2005 in Title II of the Northern Arizona Land Exchange and Verde River Basin Partnership Act of 2005 (Public Law No. 109-110). The Verde Watershed Association organized the initial broadly-attended public forum from which the Partnership evolved. That forum, held on February 11, 2006, was jointly sponsored the Verde Watershed Association, The Nature Conservancy, and the Salt River Project. The Verde Watershed Association continues as a non-voting member in the Partnership.

Title II authorizes "...assistance for a collaborative and science-based water resource planning and management partnership for the Verde River Basin in the State of Arizona, consisting of members that represent (1) Federal,

State, and local agencies; and (2) economic, environmental, and community water interests in the Verde River Basin".

The purpose of the Partnership, as stated in Title II, is to "...coordinate and cooperate in the identification of comprehensive science-based policies, projects, and management activities relating to the Verde River Basin".

Senator McCain urged from the outset that Verde River Basin Partnership look to the successful Upper San Pedro Partnership as a model. For example, in a July, 2006, letter to the Prescott Active Management Area Mayors, Senator McCain stated: "It is my hope and indeed my expectation that the Verde River Basin Partnership will be composed of a knowledgeable group of balanced interests similar to those that comprise the Upper San Pedro Partnership." Accordingly, the Verde River Basin Partnership approved the following structure in a meeting on October 12, 2006:

Counties – 4
Municipalities – 10
State Agencies – 5
Federal Agencies – 6
Tribes – 2
Water Providers – 3
Agricultural Caucus – 1
Economic Development Caucus – 1
Grassroots Environmental Groups Caucus – 1
National Environmental Groups Caucus – 1
Unincorporated/Community Water Interests Caucus – 1

The membership includes key representatives of several constituencies including federal, state, county, tribal and city governments; water providers and rights holders; concerned citizens groups; and business and agricultural interests. There are 35 potential votes in the current Partnership structure. Inasmuch as federal and state agencies generally will not vote in any policy issues, there are 24 likely voters. Counties, municipalities, and tribes represent two thirds of these 24 potential votes.

Resistance of the Prescott AMA Communities:

The Partnership's voting structure was carefully weighted to give elected officials the controlling votes and an appreciable effort was undertaken by Partnership Coordinating Committee Chair and Clarkdale Mayor Von Gausig to demonstrate to Prescott AMA city councils that the Partnership's mission is directed to science and not to policy. However, Yavapai County and the four municipalities of the Prescott Active Management Area have declined to join the Partnership. (The Yavapai County Supervisors joined *(Cont'd on Pg. 3)*

McCain (cont'd from Pg 2)

for a 6-month trial but did not continue). Collectively, the County and the Prescott AMA municipalities object to permitting a role for so-called "special interests" (member organizations that are not represented by elected officials) and have insisted on proportional representation (by population) within a voting body composed exclusively of elected officials. Unfortunately, the impasse between the Partnership and the Prescott AMA communities has hindered state and federal support for the Partnership's funding.

Activities and Accomplishments of the Partnership

Hydrology Science Plan

In December, 2006, the U.S. Geological Survey Arizona Water Science Center, working in concert with the Hydrologic Subcommittee of the Partnership's Technical Advisory Group and the Arizona Department of Water Resources, completed a Hydrology Science Plan to Support Title II of the Northern Arizona Land Exchange and Verde River Basin Partnership Act of 2005. The plan, which covers four years of work by the USGS is constructed to meet exactly the requirements and timelines for investigations and reports that are specified in Title II. Expressed as Work Elements and Tasks in the plan, these are:

Work Element 1: Water-Budget Analysis

Task 1. Review of existing studies related to water budget analyses of the region and identification of data gap

Task 2. Improved spatial and temporal distribution and rates of recharge estimates

Task 3. Inventory of surface-water diversions and returns

Task 4. Improved estimates of ground-water withdrawal

Task 5. Storage-change monitoring

Work Element 2: Analysis of potential long-term consequences of various water-use scenarios on ground-water levels and Verde River flows

Work Element 3: Reporting of the water-use scenario analysis

Work Element 4: Preliminary report

Work Element 5: Long-term monitoring and improved conceptual model of the hydrologic system

Task 1. Identify a network for the long-term monitoring of the hydrogeologic conditions that affect the middle and upper Verde watersheds

Task 2. Improve the conceptual hydrogeologic models of the middle and upper Verde watersheds

Work Element 6: Final report

Verde River Ecological Flows Study

The Verde River Ecological Flows Study was initiated in mid-2006 by the Habitat Subcommittee of the Partnership's Technical Advisory Group as a direct response to Title II's requirement for "an analysis of the potential long-term consequences of various water use scenarios on groundwater levels and Verde River flows". The effort developed into a collaboration among the Arizona Water Institute, The Nature Conservancy, and the Partnership.

The initial effort, funded by the Arizona Water Institute, was compilation of comprehensive literature summaries and preparation of background reports. These provided the basis for presentations and discussion at a workshop held in May 2007 and supported by contributions to The Nature Conservancy's Laurie Wirt Memorial Fund. The workshop was attended by 35 scientists from 16 agencies, universities, and organizations. These experts in river hydrology, geomorphology, and a range of life sciences pooled their knowledge to produce a set of flow-ecology response models for the Verde River, which describe the relationships between hydrologic variability and ecological response. These models are a set of hypotheses predicting how a reduction of flow would affect specific species of plants or animals. In addition, workshop participants identified major gaps in the available information and outlined a research agenda. The published report of the workshop and an executive summary can be downloaded from <http://azconservation.org>. Work supported by the Arizona Water Institute continues with the goal of refining and quantifying the relationships between hydrologic variability and ecological response.

Funding for limited USGS Work Received from Verde Valley Communities

The Partnership solicited and received approximately \$25,000 in funding from the City of Cottonwood and Towns of Camp Verde and Clarkdale to support a limited well-monitoring effort in the Verde River Basin. These funds were specifically intended to support a small initial component of the work outlined by the USGS in support of Title II and to show the commitment of these communities to the work of the Partnership. Plans were made with the USGS, but in the face of the communities' withering financial resources in 2008, it became apparent that no funding would be available to continue the well monitoring once it was established. Accordingly, the donated funds were returned to the three municipalities.

Discussions of Assimilation with Yavapai County Water Advisory Committee

Owing to concern about the counterproductive breach between the Partnership and Prescott AMA communities, the Partnership initiated discussion during 2008 with the Yavapai County Water Advisory Committee about finding some means of assimilation of the Partnership with the Water Advisory Committee. The Water Advisory Committee consists primarily of the County Supervisors and elected officials from the incorporated communities of both the Prescott area and the Verde Valley. An ad-hoc committee of six, composed of members of the Partnership and the Water Advisory Committee, formed to explore the possibility of assimilation. To date, the Partnership's broad assemblage of stakeholders that includes others than elected

(Cont'd on Pg 4)

McCain (cont'd from Pg 3)

officials and the Water Advisory Committee's established procedure that all decisions require unanimity in the committee continue as deal breakers.

Letters of Support

Both the Yavapai County Water Advisory Committee and the Upper Verde River Watershed Protection Coalition sent letters in July, 2008, to the Arizona congressional delegation supporting the Partnership's mission and requesting assistance in obtaining federal funding for the Partnership. In addition, in response to a visit by Camp Verde Mayor Tony Gioia, Representatives Pastor and Grijalva wrote letters in 2008 to the Director of the U.S. Geological Survey requesting that he consider applying FY-09 funds from the Water Resources Investigation account to support the first year of work specified in the Partnership/USGS Hydrologic Science Plan.

What Will the Yavapai County Communities and the State of Arizona Gain From a Successful Partnership?

- a. Faster and better decision support for regional water resource issues.
- b. A clearer understanding of how growth patterns affect our aquifers.
- c. A clear set of management alternatives that will allow DWR, the State Land Department and our communities to better manage our water resources.
- d. A data set generated by the broadest possible stakeholder group, ensuring that its credibility and accuracy will be widely accepted.
- e. Decision support for future land trade issues, lead-

ing to better confidence that we understand water resource impact of future trades.

- f. Better understanding of how our resource management decisions may affect the environment.

What Next?

In spite of requests to the Administration by Senator McCain to include funding for USGS work in support of the Partnership in both FY-08 and FY-09, federal funding has not materialized. In addition, Title II sets a time frame of fiscal years 2006 through 2010 for the life of the Partnership. Opponents of the Partnership have argued that Title II is nearing its expiration date and that consequently the Partnership need no longer be considered as viable.

Without the federal funding implied in Title II, the Partnership is defunct. On the other hand, with its federal funding in place the Partnership could begin its work and would seek cooperation with the Yavapai County Water Advisory Committee in order to optimize the use of the resources of both. The promise of a working collaboration with the Water Advisory Committee would, no doubt, overcome the resistance at the State level to support the Partnership.

Two steps seem essential: (1) An amendment to Title II to extend its life in accord with a starting year contingent with commitment of federal funding in FY-10; and (2) commitment of federal funding to an updated budget that accounts for increased costs since preparation of the Hydrologic Science Plan. Accordingly, the revised estimated budget shows an increase of about 7 percent (from an estimated \$4.815M to about \$5.16M) for initiation of USGS work in FY-10 instead of FY-08. *Submitted by Ed Wolfe*

PRIVATE-WELL OWNERS WORKSHOP FEB 2

The University of Arizona Cooperative Extension Office for Yavapai County will be offering a Private-Well Owner's Workshop on February 2nd, 2009, from 6-9pm in the Yavapai County Board of Supervisors Room located on 1015 Fair Street in Prescott, Arizona.

In Arizona there are no water quality regulations for domestic wells. Therefore it is in the interest of the private well owner to know how to best protect his or her own well.

University of Arizona water experts Kitt Farrell Poe, Janick Artiola, Gary Woodard and Channah Rock will be the instructors.

Farrell Poe is a water quality extension specialist with an emphasis in onsite wastewater treatment and safe drinking water. Janick Artiola is a specialist in analytical soil and water chemistry and Gary Woodard is the associate director

of the Sustainability of Semi-Arid Hydrology and Riparian Areas (SAHRA). Channah Rock is a soil and water specialist.

Topics to be covered are:

- Basics of well construction
- Safeguarding your well
- Testing your water
- Reading the tests results
- Preventing a well from becoming contaminated
- Treating for contaminants

This workshop is free to the public.

Submitted by Edessa Carr, University of Arizona Cooperative Extension Office for Yavapai County

Yavapai County Water Advisory Committee (WAC) Update

The Yavapai County Water Advisory Committee has identified priority projects for 2009. The Central Yavapai Highlands Water Resource Management Study (CYH-WRMS) with The Arizona department of Water Resources (ADWR) and U.S. Bureau of reclamation will remain a top priority. The WAC will also continue to contribute funding for hydrologic monitoring and modeling by both NAU and the U.S. Geological Survey (USGS).

The appraisal level CYHWRMS is nearing completion of phase 1 with identified planning areas and compilation of water-use information. The planning areas are separated into municipalities (including water-provider service-area boundaries), Census Designated Places (such as Big Park and Paulden), and the remaining unincorporated areas of the County.

The first phase of the study will result in a demand-analysis table. For each planning area, the table will contain current (2006) and future (2050) population, current demand and supply, and future demand (and also water-usage estimates for 2050 expressed as gallons per citizen per day). The table will also include the difference between current supplies and future estimated demand. The difference between the current supply and future needs will identify the location and magnitude of unmet future demands in the study area.

Future phases of the appraisal study will use the results of phase 1 to inform development and evaluation of alternatives that will meet the water needs of the future.

The USGS will continue hydrologic monitoring in the

Verde Basin. The WAC will contribute funds to operate the Williamson Valley gaging station and precipitation gage; continuous ground-water-level monitoring in 8 wells; and stable isotope monitoring of precipitation, stream flow, and winter runoff on the Mogollon Rim. The purpose of the information is to continue key long-term records and provide information useful to hydrologic models.

Northern Arizona University student Rob Ross and Professor Abe Springer are continuing to work on a surface-water model of the Verde Valley. They have completed the first phase, which created a uniform geospatial database of existing information. The purpose is to collect data relevant to building a surface-water model to better understand how surface-water flows in the middle Verde River valley respond to hydrological conditions.

This second phase of the NAU project will consist of building a hydraulic model of the Verde River from Mile Zero to the Camp Verde gage, including the perennial tributaries and the major diversions and ditches. The model will simulate (1) steady, low flow of the Middle and Upper Verde River without diversions; and (2) unsteady flow of the Middle and Upper Verde River with up to two major diversions constrained by new data collected in this study.

Please contact the WAC Coordinator, John Rasmussen, for more 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 or 928-442-5199).

Submitted by John Rasmussen, Coordinator, Yavapai County Water Advisory Committee

VERDE WATERSHED: CONDITION AT YEAR END

The Verde Watershed received 5.2 inches of precipitation from October through January 5, which is about 110% of normal. The watershed generated almost 70,000 acre-feet of inflow measured at the Verde River below Tangle Creek gauge over that same period with the majority arriving in December. Inflow to Horseshoe Lake in December was 46,000 acre-feet which is 247% of normal. The welcomed inflow helped boost Verde Reservoir storage to 41% full as of January 1, 2009.

The December storms also produced significant snow at the higher elevations. Snow water equivalent, measured at Natural Resources Conservation Service Snotel sites on the Verde Watershed, averaged 319% of normal as of January 1, 2009. However, atmospheric and oceanic features

resemble the cold phase of El Nino Southern Oscillation (ENSO), although the official indicator falls short of the La Niña threshold. Based on recent trends in the observations and some model forecasts, ENSO-neutral or La Niña conditions are equally likely through early 2009. Unfortunately, both conditions are typically dry in Arizona. The National Weather Service projections, issued this December, show a 37- 40-percent chance of below normal precipitation for January through March. Therefore, the most recent winter runoff forecast calls for only 190,000 acre-feet from January through May, 2009. The Verde Watershed is fortunate to have had the abundant precipitation through December because the trend may reverse itself the rest of the season.

Submitted by Tim Skarupa, Salt River Project

Expansion of Verde River Greenway (Cont'd from Pg 1)

Although it won't be open to the public until a comprehensive management plan is developed, it is already being managed as part of the Verde River Greenway.

The Verde River Greenway is the only designated greenway in Arizona – a tribute to the importance of the river from both an ecological and economical perspective. The greenway designation allows for protection of key migratory corridors for birds and native wildlife, as well as one of Arizona's best native fish populations and one of only two places where river otters still breed in the state. In addition to protecting wildlife habitat, the Verde River Greenway benefits people by providing agricultural and domestic water supplies, recreational opportunities, and important ecosystem services. These services include aquifer recharge, stream flow attenuation, improved water quality, improved air quality and cooling for cities.

Greenway designations often result in financial benefits to local communities as well. Greenways attract recreationists and ecotourists, visitors capable of bolstering the local economy. Of 18 million birders that travel annually, 350,000 come to Arizona, spending on average \$160 per day. Greenways improve the general reputation and desirability of an area for families and businesses looking to relocate. Quality of life is the most cited factor in determining where to locate a business or corporation; a poll of 70 CEOs of new firms locating in Arizona, representing 28,000 jobs and \$1B, chose Arizona for its outdoor lifestyle and recreational opportunities. Further, greenways

add value to surrounding property. A study by the National Association of Realtors focused on open space in Boulder, Colorado, revealed that the average value of properties adjacent to the Greenbelt was 32% higher than other homes – yielding enough revenue to recover the initial cost of the Greenbelt program.

The expansion of the Verde River Greenway by Arizona State Parks clearly benefits both nature and people – the acquisition of the new downstream anchor is a huge step in the expansion process. The project was a high priority for The Nature Conservancy due to its excellent ecological values and contribution to the Conservancy's larger-scale efforts to protect the entire Verde River and headwater grasslands. The Conservancy's role in the project was to negotiate directly with the sellers and act as a liaison for Arizona State Parks. In addition to partnering with State Parks in expanding the Greenway, the Conservancy is also teaming with Arizona Game and Fish Department, US Fish and Wildlife Service, US Forest Service, local conservation organizations (such as Verde Valley Land Preservation Institute) and private landowners to ensure continued surface flow within the river, to protect habitat for native fish and wildlife, and to restore federally listed fish populations.

Submitted by Heather Redding of The Nature Conservancy Verde Program

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:

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