

A decade of work in the watershed

By Lora Lee Nye,
Executive Board Chair

May marks 10 years since the Upper Verde River Watershed Protection Coalition was established as a science-based intergovernmental partnership charged with protecting the base flows of the Upper Verde River and achieving Safe Yield in the Prescott Active Management Area (PrAMA).

Coalition members have stayed true to their original purpose to implement projects that support achievement of a groundwater balance in the PrAMA and water supply sustainability throughout the watershed.

Work early on was focused on scientific investigation, program development, data gathering, regional messaging and outreach. Highlights of work completed include evaluation of water conservation efforts, mapping key watershed recharge areas, completing the Safe Yield Report, analyzing mountain front/mountain block recharge, supporting teachers through Project WET grants and providing technical assistance to

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Executive board thanks partners

The Upper Verde River Watershed Protection Coalition (UVRWPC) Executive Board, during its regularly scheduled public meeting on Wednesday, April 27, recognized stakeholders and watershed taskforce members who have made significant contributions to UVRWPC projects.



Arizona State Forester Jeff Whitney addresses executive board members during their regularly scheduled meeting on Wednesday, April 27

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An innovative approach to forest thinning

The Upper Verde River Watershed Protection Coalition (UVRWPC) and Arizona State Forestry (AZSF) have concluded the pilot project demonstrating use of low-impact machinery to thin juniper overgrowth.

According to John Munderloh, Chair of the UVRWPC Technical Advisory Committee, the Ponsse, Inc. harvester and forwarder could innovate grasslands restoration when compared of to traditional methods, such as hand thinning.

About 100 ranch owners, foresters, natural resource managers, and elected officials viewed the state-of-the-art computerized machinery that was put on display during four recent demonstrations, which included

use of the prototype “Arizona blade” that was specifically designed to harvest juniper trees.

The novel configuration used in the demonstrations was engineered for the purpose of shearing juniper stems to a landing. A comparative analysis of the costs per acre using the cut-to-length equipment and costs of traditional harvesting methods, such as hand crews, will be conducted to determine the economic viability of using the equipment in areas with an overgrowth of juniper trees.

“This equipment is rubber tired resulting in less ground impact and faster recovery times, and can be used on steeper slopes compared to other machinery” Munderloh said. “It also has a boom with a large reach allowing the operator

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Importance of grassland restoration and maintenance



*by Marques Munis,
District Conservationist
USDA-NRCS,
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Wide open vistas, pronghorn, strong winds, intense sun, seasonal extremes of heat and cold are all descriptors that people use when describing grasslands. Most often these harsh conditions lead people to enjoy views of Arizona's wide open grassland landscapes through the windshield of their car on the way to more highly visited forest areas. As a result of heightened recreational interest and press related to wildfires, awareness of the activities required to maintain healthy forests is higher than it is for grasslands.

However, like prescribed fire, forest thinning and understory treatments implemented to maintain healthy forests; grasslands must also be restored and maintained to protect the many benefits they provide Arizonans. They provide critical habitat and food for many types of wildlife, including

pronghorn, burrowing owls and black-footed ferrets. Grasslands help maintain and control flows to numerous stretches of perennial streams like the Verde and Agua Fria Rivers. They also sustain the ranching industry, which provides numerous economic benefits to rural communities and businesses.

Unfortunately, we face a real problem in Arizona as juniper trees have expanded their historic range and are leading to wide-spread conversions of grasslands to woodlands. We have lost an amazing

70%, or 15 million acres, of native grassland to shrub and tree encroachment, erosion and invasive, non-native plants due to current climate regimes, fire suppression, and land use practices.

Recently, federal, state and local agencies, as well as private industry and land owners have come together through the Natural Resource Conservation Services, Regional Conservation Partnership Program to expand activities related to grassland restoration. Many of you have probably seen some of these activities as you travel through Yavapai County. Activities include prescribed burning, mechanical removal of juniper trees, prescribed grazing, fencing and livestock and wildlife water developments.

As you travel through these in credible grassland landscapes and observe some of these activities, please remember that grasslands, like forests and woodlands, provide a unique set of benefits and the diversity they add to our area is critical to many species of wildlife, rural business and local communities.



History of Big Chino water rights

The idea of importing additional water to central Arizona goes back to the 1920's with the inception of the Central Arizona Project (CAP) as a way to sustainably support population growth in Arizona. The CAP, like most water projects, took nearly half of a century to get through legal and administrative hurdles before construction was underway. By the early 1980's the Arizona Department of Water Resources had allocated water rights to various communities in Arizona, including the City of Prescott (Prescott) and the Yavapai-Prescott Indian Tribe (YPIT).

Although a canal was constructed to deliver water to the Phoenix and Tucson areas, the CAP never intended to deliver water directly to communities in Northern Arizona. Rather the plan was for these communities, including Prescott, to draw their water directly out of the Verde River and exchange CAP allocations to one of the downstream users of Verde River water. This would allow for any impacts to downstream water supplies to be made whole by the direct delivery of the CAP allocation. As environmental compliance laws became more stringent in the late 1980s, it became impractical for Prescott to take a direct diversion from the Verde River to fulfill their CAP allocation. Instead, a number of events in the early 1990s allowed Prescott to exchange the CAP allocation for groundwater rights in the Big Chino Sub-basin.

- 1990 – Prescott purchased the Weber and Dugan Ranches in the Big Chino Sub-basin near Paulden as a future groundwater supply
- 1991 – Arizona Legislature passes the Groundwater Transportation Act recognizing Prescott's right to up to 14,000 acre-feet of water from the Big Chino Sub-basin,

including water necessary to meet obligations to a Federal Reservation (the Yavapai Prescott Indian Tribe)

- 1994 – Prescott and other parties settle the water rights claims to the YPIT. As a result, Prescott has the obligation to meet current and future water needs for the YPIT.

- 1994 – City of Scottsdale purchases Prescott's and the YPIT's CAP allocations. The funds are held in a trust fund by ADWR to be used for future water acquisition costs by Prescott and on behalf of the Tribe

With these elements in place, Prescott planned to move forward on a pipeline to bring groundwater from the Dugan Ranch near Paulden and into Prescott in the late 1990s. Verde Valley communities raised concern about possible impacts to the Upper Verde River Springs (UVS) from pumping groundwater from about 4 miles away. After much debate and public input,

Prescott purchased a water ranch (the Big Chino Water Ranch or BCWR) much further away from the UVS and on the other side of an underground hydrologic restriction or barrier commonly called the clay plug. Pumping water an additional 16 miles and purchasing another ranch property substantially increased the cost of importing water so in 2004 Prescott brought the Town of Prescott Valley into the project as a 46% cost share partner in exchange for an equal percentage of the water.

In 2008, Prescott applied for a re-designation of its assured water supply

determination from ADWR to include the Big Chino Water Ranch supplies. This process opened the door for public objection and a number of lawsuits and administrative hearings were launched to prevent Prescott from importing water from the BCWR in spite of the earlier transfer of CAP allocations. The objections were led by the Salt River Project, the largest raw water provider for the Phoenix area and a senior user of Verde River water.

In 2010, Prescott, Prescott Valley and Salt River Project settled these various lawsuits out of court. The 2010 settlement between the three parties resulted in unwinding the on-going litigation, modifying ARS §45-555(E) to limit the amount of water Prescott could transport from the Big Chino to 8,068 acre-feet per



year and a number of other general stipulations including an agreement that pumping by Prescott and Prescott Valley would not harm the UVS. This Agreement in Principle led to a subsequent

agreement to increase the hydrologic monitoring network in the Big Chino Sub-basin and to construct a detailed groundwater model to determine how to best manage groundwater withdrawals so that no harm is done to the UVS. Currently Prescott, Prescott Valley and SRP are focused on the monitoring and modelling efforts that will lead to a mitigation program to ensure that future pumping does not harm the UVS. The agreements and annual progress reports are completed and posted on <http://www.prescott-az.gov/services/water/chino.php>.

Arizona Commerce Authority awards grant to Town, Coalition

The Town of Prescott Valley and Upper Verde River Watershed Protection Coalition (UVRWPC) were recently notified by the Arizona Commerce Authority that they have been awarded a grant to conduct a labor market analysis of the Yavapai County forest products industry.

According to John Munderloh, chair of the UVRWPC Technical Advisory Committee, a grant agreement will be in place by July 26 and the analysis will be complete within six months or by January 26, 2017.

A labor market analysis is a component of the investment grade data that will be used to develop a business portfolio to attract forest products industries to the region. It complements a wood supply study for Yavapai County already underway.

The analysis will identify and assess if the appropriate human capital exists to support the workforce needs of a forest products industry. It focuses on business sectors located in a well-defined geographic region, in this case Yavapai County. Using qualitative and quantitative research methods, economists and statisticians will analyze

workforce factors, such as the quality of the existing labor pool, recruitment, annual job openings (new/turnover), wages, benefit compensation, cost of living, quality of life measures, industry trends, employment forecasts, market competition, and the availability of workforce training/education.

In meetings hosted by the UVRWPC in the fall of 2015, representatives from forest products industries said there is a heightened interest in Yavapai County, but a lack of investment grade data was hampering forward progress.

“We listened and are making a concerted effort to acquire data necessary to increase our opportunities for economic development and reinvigoration of forest projects industries in the region,” Munderloh said.

The acquisition of investment grade data is one piece of a larger project that supports UVRWPC watershed management goals and its grasslands restoration priority which includes reduction in the risk of catastrophic wildfire, improving ecosystem health, and optimization of water resources.

Partners, Continued from page 1

Chair Lora Lee Nye thanked each stakeholder in attendance.

WATERSHED STAKEHOLDERS AND PARTNERS
Arizona Game & Fish
Arizona State Forestry
Arizona State Land Department
City of Cottonwood
Dava & Associates
Drake Cement
Private landowners
Lincoln Policy Institute
Natural Resource Conservation Service
Prescott Active Management Area, Groundwater Users Advisory Committee
Prescott National Forest
Private citizens
Office of United States Representative Paul Gosar
Salt River Project
Sonoran Institute
The Nature Conservancy
United States Bureau of Reclamation
Greater Prescott Economic Development Partnership

“Work that is unfolding in our watershed would not be possible without your efforts,” she said.

“The catalyst for this ongoing collaboration was passage of the coalition’s watershed initiative and establishment of the multi-stakeholder watershed taskforce in 2011; as well as, most recently, implementation of the effort to improve forest health and reinvigorate a forest products industry.”

State Forester Jeff Whitney told board members that Arizona State Forestry remains committed to the UVRWPC and its work in the watershed.

He said state forestry looks for collaborations that complement the “all hands, all lands” management approach allowing for resources to be shared for maximum benefit.

Ponsse Harvesting Machine



Ponsse Forwarder Machine



Watershed,

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small water providers.

Promoting the reasonable water needs of residents and businesses within watershed boundaries is a Coalition mainstay. The City of Prescott launched the Water Smart program in 2007 and it was quickly adopted by the Coalition as the umbrella for a region-wide water conservation education program.

Over the last decade, municipal groundwater pumping has declined by at least 15%, due, in part, to water conservation education conducted by the Coalition. Over the last several years, the Coalition has ramped up its public communication effort with its yavapaiwatersmart.org website, Yavapai Water Smart News publication, targeted advertising, media relations, presentations to community groups, and event outreach.

Watershed health became a Coalition priority in 2012 when the Executive Board adopted the Watershed Initiative. A grant from the U.S. Bureau of Reclamation helped to establish a watershed taskforce and write a watershed plan. Scenario planning, supported by a grant from Sonoran and Lincoln Institutes, brought together the best and brightest from around the state to hone our project concepts. Complete in the fall of 2014, the Watershed Restoration and Management Project Plan laid the groundwork and guidance for the good work that is currently unfolding in the watershed.

Implementation of the plan's forest health initiative is currently on the front burner of Coalition activities. Efforts are ongoing with Arizona State Forestry, and other partners, to address forest health through a private enterprise and entrepreneurial approach to re-invigorate a forest products industry and establish markets for by-products of forest restoration activities. This is a Coalition priority because a healthy forest supports a

sustainable water supply and protects the watershed from the consequences of catastrophic wildfire.

The first phase of a restoration plan for Slaughterhouse Gulch on Yavapai-Prescott Indian Tribe reservation land has been finalized, and work is ongoing to locate and apply for funding to accomplish the "boots on the ground" work.

The Coalition is also a member of the Arizona State Forestry led Woody Biomass Enterprise Team. A grant-supported Wood Supply Study is underway and will be complete by mid-summer of this year. A wood harvesting and equipment demonstration supported by State Forestry, the Coalition and local landowners is complete and an analysis of the information learned and data gained is ongoing with the final report expected in mid-summer.

A \$1 million grant through the USDA Regional Conservation Partnership Program, awarded in partnership with Arizona Game & Fish and managed through the Prescott Valley office of

Forest thinning

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work around culturally sensitive sites, allows the operator to selectively thin invasive species without harming beneficial trees, and is safer than traditional hand thinning because it takes the operator off of the ground."

Approximately 100 acres of overgrowth on state and private land were treated during the demonstrations. An analysis is currently being conducted and a final report is expected in mid summer. (See demonstration photos on page 5.)

the Natural Resources Conservation Service, will result in the treatment of 4,000 to 5,000 acres of overgrowth in the watershed.

Our Coalition members have contributed about \$1.4 million over our decade long history in the form of annual dues, and we have received direct contributions of nearly \$1.2 million in the form of grants over the same time period. That number does not include the thousands of hours of work by our partners to accomplish projects.

The Coalition's greatest achievement is its ability to engage stakeholders from the public and private sectors and maintain partnerships assuring a multi-disciplinary approach to management of the Upper Verde Watershed. We recently recognized our many partners in success at the Coalition Executive Board meeting in April. We'll be adding to this list of partners and to the list of successes in the years to come.

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