

YAVAPAI Water Smart™ NEWS

UPPER VERDE RIVER
WATERSHED PROTECTION COALITION

October-November 2015

Coalition prioritizes Upper Verde River, water supply security

By Lora Lee Nye,
Chair Coalition Executive Board

As Executive Board Chair of the Upper Verde River Watershed Protection Coalition (UVRWPC) over the last four years, I have witnessed firsthand the positive attributes of an intergovernmental regional partnership.

The UVRWPC was established as a consensus based group with members that have a common interest and responsibility to protect the Upper Verde River and secure the future of our water supply.

As a group, we are seeing accomplishments and positive strides that individually would not have been possible. Our Watershed Taskforce, a UVRWPC subcommittee, has resulted in the solidification of valuable relationships with local, state and federal agencies; the non-profit sector, and business community.

A \$1 million grant came about through a partnership with the Arizona Game and Fish Department (AGFD) with unwavering support from our local United States Department of Agriculture Natural Resource Conservation office (NRCS) in Prescott Valley, and the Prescott National Forest Chino Valley Ranger District. All are active members of our watershed taskforce.

The Upper Verde River Watershed Restoration and Management Project Plan was completed by the taskforce in September 2014. Priority projects identified by members after two years of scientific investigation and research

See Water Supply Security, page 3

UVRWPC, state agency receive \$1.5 million grant

The UVRWPC, in partnership with the Arizona Game and Fish Department, successfully competed for \$1.5 million from the United States Department of Agriculture (USDA) to support forest health within the watershed.

According to John Munderloh, chair of the UVRWPC Technical Advisory Committee, funding was awarded as the result of a request submitted to the through the USDA Natural Resource Conservation Service Rural Conservation Partnership Program (RCPP).

He added that an estimated \$1 million of the \$1.5 million over several years will be used to manage overgrown vegetation.

“This will address part of our vegetation management goals established as a priority in the UVRWPC Watershed Restoration and Management Plan,” he



Typical overgrown pinyon-juniper.

said. “The idea is that we thin overgrown and invasive vegetation, restore native grassland, and allow water to recharge the aquifer rather than being used by the larger plants and trees.”

Jim Gilsdorf, Prescott National Forest (PNF) District Ranger said land slated for management is located within the watershed in unincorporated areas of Yavapai County. Gilsdorf was also a

See Grant, page 8

Biomass removal and utilization demonstrations

Implementation of two biomass demonstration projects designed by the UVRWPC and its partners was unanimously approved by the Executive Board during its public meeting on Wednesday, September 30.

According to John Munderloh, Chair of the UVRWPC Technical Advisory Committee, both will provide important benefits leading up to full-scale implementation of a comprehensive vegetation management and monitoring program.

Demonstrations will be conducted in the Big Chino Sub-basin of the Upper Verde River Watershed – one on state land, the other on private ranch land.

“There will be one site on private ranch land, and four to five sites on state land,” Munderloh said. “Each site will be 35 to 70 acres.”



Cross U Ranch Demonstration Site.

Benefits to implementation include:

- Determining the quality and quantity of marketable biomass from our watersheds
- Determine cost benefit of hand vs. mechanical thinning
- Demonstrate use of innovative low-impact harvesting

See Biomass, page 6

Reclamation and aquifer recharge contribute to water supply security

By John Munderloh, Town of Prescott Valley Water Resources Manager

Communities in the Prescott area are making good use of a water resource that used to be considered a waste product. Waste water treatment plants operated by the City of Prescott and the Towns of Prescott Valley and Chino Valley clean up wastewater, or reclaimed water, and apply that water to offset groundwater uses or recharge the groundwater system.

Most of the area golf courses that at one time depended on groundwater now receive reclaimed water to meet their water needs. This still leaves about 66 percent of reclaimed water available to recharge the aquifer.

Communities are able to recover

between 50 and 65 percent of the potable water they deliver to customers as reclaimed water. This has become a vital resource to achieve Safe Yield by 2025 in the Prescott Active Management Area (PrAMA) groundwater basin. Safe Yield occurs when groundwater tables in the PrAMA groundwater basin are no longer in decline.

Mechanics of the recharge process are



City of Prescott recharge facility

simple; reclaimed water is put into basins and held until it seeps into the ground and eventually works its way to the aquifer. The process is highly regulated

See Reclamation page 3

OPINION

Water Management On-Course in Prescott AMA

By Bob Roecker, Member Groundwater Users Advisory Committee

On July 28, 2014, the Director of the Arizona Department of Water Resources (ADWR) published the Fourth Management Plan for the Prescott Active Management Area (AMA). This plan has major implications for the water users in our area, but received very little coverage in the press and is overlooked by self-proclaimed water experts in our area. The reason for the oversight is simple: the plan contains good news about the outlook of our groundwater water supplies.

Passage of the landmark Groundwater Management Act (Act) by the Arizona Legislature in 1980 laid the groundwork for our water management future. It established five AMAs, including the Prescott AMA; set a goal of reaching Safe Yield by 2025; and created ADWR to enforce the Act. Safe Yield is the term coined by the Act whereby our use of groundwater is balanced by groundwater recharge.

In simple terms, the Fourth Management Plan concludes that we can reach Safe Yield in the Prescott AMA if we can accomplish three things: 1) Ramp up water conservation efforts, 2) Capture, treat, and

recharge all of the waste water we produce and 3) Import water from the Big Chino Sub-basin.

The three tasks identified in the Fourth Management Plan have been embraced by major water providers in the Prescott AMA. Prescott and Prescott Valley have achieved a 20 percent decline in overall water use in the past eight years in the face of population growth with a focus on water conservation and a tired water rate structure. These two communities and the Town of Chino Valley also capture, treat and recharge most of the water they deliver through municipal systems. However, there is more work to be done in the area of wastewater recharge. There are residences in the PrAMA served by private wells and septic systems. The amount of water that septic systems recharge to the groundwater system is unknown, but we do know that we don't want the untreated water generated by septic systems going back to the aquifer.

As most people are now aware, Prescott and Prescott Valley are working to import groundwater from the Upper Big Chino. Unlike the popular and inaccurate portrayal, this project has been designed with careful consideration of flows in the Upper Verde River. Prescott and Prescott Valley have

an iron-clad multi-year agreement and comprehensive monitoring plan with Salt River Project (SRP) to ensure protection of the river. SRP is the largest water provider in the Phoenix area and receives most of its water supply from the Verde River. As a tremendously powerful political force, SRP is in the best position to enforce this agreement to ensure that importing water from the Big Chino does no harm to the Verde River

ADWR, through the Fourth Management Plan, has designed a path for our area to reach Safe Yield. Our major water providers continue to work closely with ADWR to provide advice and ensure our voices are represented. The partnership with SRP ensures that we do not cause harm to the environment. These simple facts address most of the concerns that I see raised in the various commentaries about our water supply. Let's start focusing on implementation of the Fourth Management Plan. It is the framework for water management efforts.

(Bob Roecker, Member of the PrAMA Groundwater Users Advisory Council Former Prescott Councilmember Former Co-chair, Yavapai County Water Advisory Committee)

Water Supply Security

Continued from page 1

include vegetation management, addressing the negative impacts of urbanization, recharge enhancement, land use management, water conservation and aquifer protection.

UVRWPC members have several objectives in relation to vegetation thinning and management on forest lands including reduction in catastrophic wildfire, restoration to a native setting, monitoring the new growth through repeat photography, and optimizing natural recharge to our aquifer. This area will take a front row seat in the coming year.

An evolving partnership with Arizona State Forestry is resulting in numerous benefits. We are developing demonstrations that will begin to yield answers as to the recharge impacts to vegetation thinning, and developing markets for use of woody biomass harvested from our forests.

Water Smart is our brand that is the umbrella under which we develop and distribute regional water conservation information. We continue to work with local schools, and recently established a new collaboration with the Western Yavapai Conservation Education Center that will allow us to expand our outreach efforts.

For those folks who may be reading this, but may not be as familiar with the UVRWPC, its formal partners include the City of Prescott, Towns of Prescott Valley and Chino Valley, Yavapai County and Yavapai-Prescott Indian Tribe. Established in 2006, its mission is to protect the base flow of the Upper Verde River while balancing the reasonable water needs of businesses that operate and residents who live within watershed boundaries.

This is our inaugural issue of Yavapai Water Smart News, a UVRWPC publication that will be produced every two months. It will include coalition news and features, as well as information from our partners. If you have any comments or questions, please e-mail me at lnye@pvaz.net.

(In addition to chair of the UVRWPC Executive Board, Lora Lee Nye is a Town of Prescott Valley Council Member and a former Vice-Mayor.)

Water conservation works

LOCAL WATER USE CONTINUES TO DECLINE

Annual reports recently filed by the two largest water providers in the Prescott area show that water conservation programs are working.

According to John Munderloh, Water Resources Manager for the Town of Prescott Valley, the City of Prescott and Town of Prescott Valley are required to supply documentation on conservation programs each year to the Arizona Department of Water Resources (ADWR).

“Water conservation programs have been mandated by the State of Arizona for large water providers located in Active Management Areas (AMA) since passage of the Groundwater Management Act in 1980,” he said. “Prescott and Prescott Valley qualify as large water providers and are located in the Prescott AMA. The largest water use for both municipalities occurred in the mid-2000’s, during the peak of the largest building boom in the area’s history.”

Leslie Graser, City of Prescott Water Resources Manager, said the city’s water use has dropped 20 percent over the last decade.

The Town of Prescott Valley has also seen a decline in its water use over the same time period.

“The daily per-person water use is down from a high of about 130 gallons ten years ago to below 100 gallons now,” Munderloh said.

Graser and Munderloh attributed the reduction in water use to tiered rate structures and other community efforts like Water Smart, a regional water conservation outreach and public education program.

“Differential or tiered rates include increased charges for each unit of water used above a base quantity and reward people who conserve with lower water bills,” Graser said. “In other words, the more you use above the base quantity, the more you pay.”

Water conservation programs are selected from a list of Best Management Practices provided by ADWR.

“This gives us the ability to select those programs that work best for our communities rather than a one size fits all approach,” Graser added “There is a renewed focus on outdoor water conservation, such as landscape watering. This is water that is lost to evaporation and not available for reclamation through our recharge facilities.”

The City and Town operate recharge facilities to reclaim, treat and recharge interior waste water. “Basically everything that is flushed or goes down a drain inside a home or business located in the town or city limits is available for reclamation and recharge,” Munderloh said.

Groundwater from the regional aquifer underlying Prescott Valley and Chino Valley is the primary source of supply for the two communities. Water management plans that set policy and goals for large water providers in each AMA are produced by ADWR every 10 years. The 4th Management Plan for the PrAMA was completed by ADWR in 2014.

Reclamation

Continued from page 2

by the Arizona Department of Water Resources and Arizona Department of Environmental Quality to ensure that water quality meets national standards and that the recharged reclaimed water is accounted for. In all, about 55 percent of the groundwater pumped for municipal uses in the PrAMA is regenerated as reclaimed water to offset groundwater use and to recharge the aquifer.



Town of Prescott Valley recharge facility

NEWS FROM OUR PARTNERS

TOWN OF PRESCOTT VALLEY

Water smart irrigation saves millions of gallons of water

The Town of Prescott Valley's computerized parks' irrigation system is paying dividends.

With partial grant funding from the United States Bureau of Reclamation (USBR), the Town installed smart irrigation technology at 16 parks that now results in a water savings of more than six million gallons of water a year.

"Our goal is to maintain high-quality turf grass and healthy plants, while being water wise and efficient in our usage," Neil Groblewski, Town Parks and Recreation, said.

According to Groblewski, the Town maintains 350 acres of parks and open spaces, which includes 45 acres of turf at numerous locations and thousands of

trees and shrubs.

"In our dry climate, it was becoming increasingly difficult to keep our turf and landscaping healthy without using a substantial amount of water," he said. "The wind, coupled with the lack of rainfall amplified the problem. We did not have weather based programming to manage our irrigation. Installation of the computer-based system was the best solution."

The system was installed over two years at seven parks in 2013 and nine in 2014.

"We are pleased that we could maintain



Neil Groblewski adjusting irrigation using smart phone.

the same quality of turf and save millions of gallons of water," he added. We now have every site on line with ET water, and

Water Smart Irrigation page 7

CITY OF PRESCOTT Water Conservation starts with you!

Water conservation, using water efficiently and avoiding waste, is essential to ensure that the City of Prescott has an adequate water today and into the future. Our groundwater is the lifeblood of our community...but is a finite resource so we must use it wisely. Wise and efficient use of our water resources is up to all of us and it is as simple as making small changes. Make conserving water a daily part of your life. And remember when you save water, you save energy and money!

Does the City of Prescott conserve water?

The City of Prescott water customers have been conserving water since 1893 when the City council passed a resolution limiting water use for irrigation and businesses. Since then, due to community water conservation habits, the City has been resilient during the many dry times that are a common occurrence in Arizona

- In 1981 the City created an Energy and Resource Task Force whose accomplishments included development of a low-water use native plant list suitable for the Prescott area.
- In 1982 the City adopted a Water Conservation Code to establish maximum flow rates for plumbing fixtures and other devices to

conserve water.

- In 1987 the Water Conservation Code was amended to restrict the filling of artificial lakes with potable water.
- In 1990 the City decided to read water meters on a monthly basis, as opposed to quarterly, to promote water conservation.
- In 1992 the City implemented the Water Conservation Incentive Program to provide rebates to customers for water conservation efforts, prohibited the use of spray fountains, and declared it unlawful to allow potable water to be used for irrigation or be allowed to flow in the streets.
- In 2006 the Water Conservation Code was amended to change outdoor watering times during summer months and the City adopted tiered rate structure (lower rates for less water use, higher rates for greater water use).

Does water conservation really work?

In 2006, the City of Prescott through a citizen committee increased water conservation efforts and has seen big water saving results! Since 2006, the total groundwater pumped to serve water customer needs has reduced each year, even with a growing population. In fact,

since 2006 the Water Conservation Rebate program has supported over 2,500 citizen conservation efforts that have resulted in an estimated water savings of 917 acre feet and counting! These savings include over 500,000 square feet of turf removal, the installation of almost 2000 low flow toilets, and the installation of almost 18,000 gallons of rainwater harvesting capacity to name just a few.

What can I do?

Water conservation is the responsibility of everybody because every drop counts! Did you know that during the summer months water use almost triples due to outdoor water use? Even as we approach fall, practicing a low water-use lifestyle outdoors significantly reduces water use but also saves money, reduces runoff, and is a fun way to create your own unique yard. Visit www.prescottwatersmart.com to explore beautiful garden galleries with examples of local front and back yard landscapes and plant recommendations that work best for our climate. Plus you'll find resources for landscape design, irrigation, and maintenance. And don't forget to check out the Water Conservation rebate program for big savings on water conservation!

How does growth get water?

Residential growth does not impact groundwater supplies

After several years of a depressed housing market in the Prescott area, new home construction has started to pick up again. Along with growth come questions about impacts to water supplies.

Water management in Arizona is complex but effective. Unlike our neighbors in California, Arizona has not experienced the same impacts from drought largely because of the advance planning that began more than three decades ago with passage of Arizona's 1980 Groundwater Management Act (Act), and formation of the Prescott Active Management Area (PrAMA). The 1980 Act requires that every new subdivision in the PrAMA prove to the Arizona Department of Water Resources (ADWR) that it has a 100-year water supply before the subdivision can be approved by municipalities. New subdivisions cannot use water that has been allocated to any previously approved subdivision, and the calculation includes impacts from long-term drought.

With the exception of homes with a private well, new homes in the PrAMA

have been built on subdivision lots that were approved prior to 1999. Pre-1999 subdivisions were allowed to demonstrate a 100-year Assured Water Supply based on water stored in the local aquifer. But in January 1999, ADWR issued a rule that prevents any new subdivisions from using additional water from the aquifer. This rule, and enforcement by ADWR, reserves the water in the aquifer for current residents and owners of the pre 1999 lots.

New subdivisions in the Prescott area are still a possibility, but developers must achieve a much higher standard to demonstrate a 100-year Assured Water Supply. Without the ability to use groundwater from the aquifer, new subdivisions have limited and more expensive choices for water. These alternative water supplies include extinguishment credits, effluent credits, surface water from lakes or streams and water imported from outside of the groundwater basin.

Extinguishment credits are created when a water right that existed prior to the 1980 Act is taken out of service (typically irrigated agriculture) and the use is converted to a 100-year Assured Water Supply.



Effluent credits are created when reclaimed water from a wastewater treatment plant is stored below ground in vacant pore space above the water table. A developer can purchase these credits to prove a 100-year water supply.

Using water from lakes and streams requires a senior water right under Arizona Law; typically a use that existed prior to Statehood that would be taken out of service and converted to a 100-year Assured Water Supply. The common characteristic of all of these alternative water supplies is that they do not reduce the volume of water in the aquifer.

In many ways, the 1980 Act is a consumer protection act that protects groundwater supplies for Prescott Area residents and prevents new subdivisions from threatening that supply.



Arizona Biomass Enterprise Grants

Forests and woodlands across the state of Arizona are in need of market development opportunities to facilitate on the ground restoration activities. Arizona State Forestry and the USDA Forest Service are committed to advancing the installation of commercially viable wood energy systems in the public and private applications which use woody biomass generated from public lands and other land ownerships, in Arizona.

Arizona State Forestry, with funding provided by the USDA Forest Service, is soliciting costshare project proposals for woody biomass utilization projects. The funds are made available to assist with the financial costs of procuring preliminary engineering assessments, wood energy conversion feasibility studies, and wood fiber supply studies. Funds originate from the USDA Forest Service and are awarded and administered as sub-grants from Arizona State Forestry

- The maximum award is \$30,000.
- Projects require an additional local cost-share match equal to the award amount (1:1).
- Projects must be achievable within 24 months.
- Grant applications are due by January 11, 2016.

Eligible Applicants

- Units of local government (counties, municipalities, cities and towns)
- Non-Profit Organizations 501(c)3
- Public educational institutions
- State agencies
- Tribal governments

Guidance and instructions on the application process can be found at <https://azsf.az.gov/grants/utilization>. For more information or questions, contact Patrick Rappold, Ph.D., Wood Utilization and Marketing Specialist, Arizona Forestry Division at 928-637-0549 or PatrickRappold@azsf.gov.

PRESCOTT ACTIVE MANAGEMENT AREA

Groundwater balance within reach, state says

The final draft of the Prescott Active Management Area (PrAMA) 4th Management Plan has been released by the Arizona Department of Water Resources (ADWR). And it is good news for Yavapai County communities located within the water management area.

PrAMA boundaries encompass the City of Prescott; Town of Prescott Valley; Yavapai-Prescott Indian Reservation; the Towns of Dewey-Humboldt and Chino Valley; and portions of Yavapai County. The Prescott AMA is the only area within Yavapai County that must comply with State water regulations.

According to the 4th Management Plan, ADWR developed and analyzed scenarios that show the PrAMA can achieve safe yield by the state designated deadline of 2025. In 1999, ADWR issued a groundwater mining declaration (out of safe yield) for the PrAMA.

“It is possible for the PrAMA to achieve safe yield by 2025, and safe yield can be maintained in the PrAMA as far into the future as about 2070 (at projected growth rates),” as written in the plan preliminary draft “but it will require importation and use of Big Chino groundwater, or some other supply; a diligent commitment to increasing the proportion of the population on central sewer; increasing the efficient use of all water supplies; and careful management of the storage and recovery of reclaimed water; as well as direct or indirect use of locally available surface water.”

Safe yield is defined in the Arizona Groundwater Management Act (GMA) as “a groundwater management goal which attempts to achieve and thereafter maintain a long-term balance between the annual amount of water withdrawn in an active management area and the annual amount of natural and artificial recharge in the active management area.”

The GMA, passed in 1980, defined five active management areas within Arizona and established the ADWR as the

dollars and countless hours of personnel resources to tackling our tough water supply and management issues.”

John Munderloh, chair of the UVRWPC Technical Advisory Committee and Prescott Valley Water Resources Manager, said the UVRWPC supports attainment of safe yield while protecting the Upper Verde River. He provided specific examples of how PrAMA communities, both individually and in partnership, have worked to achieve a groundwater balance.

“Our communities have constructed systems that recycle reclaimed water back to the aquifer, and are working cooperatively with Salt River Project to import water from the Big Chino sub-basin without impacting the Upper Verde River.

“We also actively develop and participate in water conservation

programs, regularly report progress to the ADWR, adhere to State programs that limit development, adopt and utilize ADWR best management practices, and partner with other communities in the AMA and Yavapai County to investigate alternative water supplies, and manage the watershed. The broad agreement with Salt River Project to import water from the Big Chino into the PrAMA, at some future date, was finalized in 2010.”

The PrAMA 4th Management Plan is available for download from the ADWR website at www.azwater.gov.

Three Steps to Achieving Safe Yield

- Importation of water from the Big Chino Sub-basin
- Increasing the number of homes on central sewer systems
- Increasing the efficient use and management of all water supplies

regulatory body charged with overseeing and guiding progress toward Safe Yield within the AMAs. Each AMA has a governor appointed Groundwater Users Advisory Committee (GUAC) comprised of local community leaders and water managers.

Lora Lee Nye, chair of the UVRWPC Executive Board and Town of Prescott Valley Vice Mayor, supported Olsen’s comments.

“We are pleased that a lengthy analysis by an independent agency has yielded this positive result,” she said. “Our communities are committing millions of

Biomass

Continued from page 1

equipment for landowners

- Determine ecological effects of hand vs. machine thinning with low-impact equipment
- Outreach to farmers and ranchers operating in the watershed
- Demonstrative forest stewardship activities
- Collect information critical to the biomass industry

Work will be completed in partnership with



Example of harvesting machine

Arizona State Forestry with state forestry contributing up to \$120,000 to the total project cost of \$172,000.

Jerry Payne, Deputy State Forester, told UVRWPC Executive Board members that this project was part of a governor-directed mandate to focus state forestry resources on “fire and water.”

Arizona State Forestry is also a member of the UVRWPC Watershed Taskforce, and worked on the team that developed



Example of forwarding machine

priorities and designed projects that are included in the Watershed Restoration and Management Project Plan.

Munderloh said sites will include areas that are dominated by juniper and others with a mixture of pinyon, juniper and chaparral.

FACTS AND FIGURES – Regulatory Environment

Regulatory Environment:

- Prescott Active (water) Management Area (PrAMA)
Upper Verde River Watershed Protection Coalition (UVRWPC) partners are located within the (PRAMA) and subject to regulation and oversight by the Arizona Department of Water Resources (ADWR).

Current Conditions

- The PrAMA is one of five Active Water Management Areas in Arizona. It has been in a state of groundwater mining (overdraft) since 1999.
- The region has been identified by the federal government as having a “high likelihood of conflict overwater by 2025.”
- Management of water resources within the PrAMA is directed by ADWR’s Management Plans. Currently operating under 4th Management Plan released in 2014.
- Annual groundwater withdrawals within the PrAMA are 20,000 acre feet with 10,000 acre feet of overdraft
- The PrAMA includes are 125,000 water users. 39,400 municipal service connections, and 10,000 independent private service connections provided by exempt wells

Water rights involved –Water rights within the PrAMA fall under major categories governed by Arizona Water Law.

- Groundwater rights – access strictly controlled by Arizona Department of Water Resources (ADWR) provisions include:
 - Goal of reaching Safe Yield by 2025 (balancing the amount withdrawn by the amount recharged);
 - No new residential or commercial subdivisions are allowed to access the groundwater supplies in the PrAMA (since 1999); and
 - Water conservation mandate for water providers, irrigated agriculture, and industry.
 - Moratorium on irrigated agriculture supplied by groundwater
- **Surface water rights**
 - Governed by the Doctrine of Prior Appropriation
 - Defined as water on the surface of the ground flowing in defined stream channels or subsurface water that is connected to and part of a flowing stream.
 - Although Prescott is the oldest non-Indian community north of the Gila River, most surface water supplies in the area have been appropriated by downstream users, primarily the Salt River Reclamation Project.
- **Reclaimed water (effluent)**
 - Administration is primarily governed by Arizona Supreme Court cases Long vs. APS and Long vs. City of Phoenix.
 - It is partially administered by the groundwater code as an alternative to groundwater.
 - Unlike other types of water in Arizona, effluent is “owned” by the entity that produces it. Surface water and groundwater are owned by the State and rights to use are granted to certain users
 - Within the PrAMA, almost all available effluent is directly used for irrigation or is recharged to the aquifer.
- **Rainwater or sheet flow**
 - Rainwater or sheet flow is not an appropriable source of water in Arizona as long as it is collected prior to reaching a defined stream channel.

- Arizona has established few policies governing the use of rainwater or sheet flow. Rainwater or sheet flow can be used to recharge aquifers without requiring an aquifer protection permit, underground water storage permit or recharge permit from the State.

Source of water supply - Current available water supplies within the Upper Verde River Watershed (PrAMA) include groundwater, surface water and effluent.

- **Groundwater is drawn from the Little Chino and Upper Aqua Fria sub-basins within the PrAMA.**
 - The PrAMA is an actively managed groundwater basin administered under the 1980 Groundwater Management Act.
 - Approximate annual groundwater withdrawals are 20,000 acre-feet per year (a.f.y.)
 - Approximate long-term annual recharge potential through precipitation capture is 10,000 a.f.y.
 - Average annual overdraft is 10,000 a.f.y.
- **Surface Water in the PrAMA (useable supplies)**
 - Watson and Willow Reservoirs – approximately 1,100 a.f.y.
 - Lynx Lake – approximately 200 a.f.y.
- **Reclaimed Water (effluent)**
 - City of Prescott – approximately 4,000 a.f.y.
 - Town of Prescott Valley – approximately 2,200 a.f.y.
 - Town of Chino Valley – approximately 50 a.f.y.

Water Smart Irrigation

Continued from page 4

are looking forward to continued water savings well into the future.”

Water conservation is just one part of the equation.

“There is significant time and gasoline savings over the older system which required physically driving to each park and conducting manual checks. Now we receive electronic updates on the system status and can adjust the system remotely using our Smart Phones,” he added. “It really is a major improvement and benefit to our parks.”

John Munderloh, Water Resources Manager, oversees the town’s water conservation efforts and reports to the Arizona Department of Water Resources on conservation-related improvements instituted by the town.

“We are very satisfied with the system and the results,” he said. “It is operating as specified with little or no problems. Electronically controlled irrigation is the most efficient method of applying water to our green spaces. It also results in healthier lawns that are not over or under watered.”

According to Munderloh, over the two-year period of the grant, the USBR contributed \$41,980 and the Town has contributed \$72,437.

“The Town is saving approximately \$20,000 a year in water costs,” he added. “Coupled with the savings in time and labor, the system has already paid for itself.”

Grant

Continued from page 1

member of the UVRWPC Watershed Taskforce that worked over the last two years to develop the watershed plan and vegetation management project.

“This is good news. Combined with other efforts throughout the region, including implementation of the PNF Land Management Plan, we are taking positive steps to restore our ecosystems, enhance resiliency in our watersheds and manage our vegetation to reduce the risk of catastrophic wildfire,” he said.

Lora Lee Nye, Town of Prescott Valley Council Member and UVRWPC Executive Board Chair, was “thrilled” when she heard the news.

“In many ways, this is affirmation of our watershed partnership, the taskforce and its effort to develop the watershed plan,” she said. “This is boots on the ground work that must be accomplished if we are ever to get a handle on the natural resource concerns facing our region.”

According to information provided by the Natural Resource Conservation Service (NRCS), the joint funding proposal received approval for its “ability to deliver high priority outcomes to local, regional, and national resource concerns.”

Marquis Munis is the acting district conservationist for the USDA NRCS in Prescott Valley. He is also a member of the watershed taskforce and will be pivotal in project implementation.

“Funding will allow us to demonstrate how partnerships and communities can work together to conserve and use our natural resources responsibly for mutual benefit,” he said.

Along with vegetation thinning, the UVRWPC and its watershed taskforce are working to develop markets for the use of woody



Juniper encroaching on grassland.

biomass harvested from forestlands.

“This is more than just vegetation thinning,” Munderloh said. “It is a multi-faceted effort that includes reducing the risk of catastrophic wildfire, developing markets so we can further thin vegetation, and optimization of natural recharge to increase the amount of water that reaches our aquifer.”

Watershed plan guides restoration efforts

The Upper Verde River Watershed Taskforce culminated a two-year planning effort with finalization of its Watershed Restoration and Management Project Plan in September 2014.

Committee membership in the multi-stakeholder group includes the UVRWPC, State Land Department, Arizona Forestry, Natural Resource Conservation Service, Arizona Game and Fish Department, Prescott National Forest, Arizona Department of Water Resources, Salt River Project, The Nature Conservancy, United States Bureau of Reclamation, business owners and citizens.

“This project-based plan charts our future direction, said Lora Lee Nye, chair of the UVRWPC Executive Board and Town of Prescott Valley Council Member. “It includes priorities for watershed restoration and projects designed to address those priorities.”

Critical watershed issues identified by committee members early in the process include water supply security, forest health, increase in catastrophic wildfires, and proliferation of invasive species.

Project priorities developed to address critical watershed needs include vegetation restoration and management; infiltration enhancement; capitalization on urbanization; potential policy recommendations

Vegetation management involves thinning of overgrown and invasive vegetation, restoring native grassland, and allowing water to recharge the aquifer rather than being used by the larger plants and trees.

“This effort will be at the forefront in the coming year as we work to implement the grant through the United States Department of Agriculture Rural Conservation Partnership program,” said John Munderloh, chair of the UVRWPC TAC and water resources manager for the Town of Prescott Valley. “It also includes development of markets to use the woody biomass thinned from our forestlands.

Infiltration enhancement involves the construction of retention structures in identified washes to slow down the flow of water giving it time to penetrate the ground rather than evaporate.

Capitalization on urbanization is similar to infiltration enhancement, taking advantage of hardscapes created by development and redirecting runoff to areas where it has the opportunity to infiltrate the ground.

Policy recommendations may be developed to further promote water conservation and aquifer protection.

The final Watershed Restoration UVRWPC Executive Board formally adopted the plan at their public meeting In January 2015.

EXECUTIVE BOARD

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