Verde River Basin PARTNERSHIP

Informing the community about our water

Verde Watershed Currents

Summer 2014

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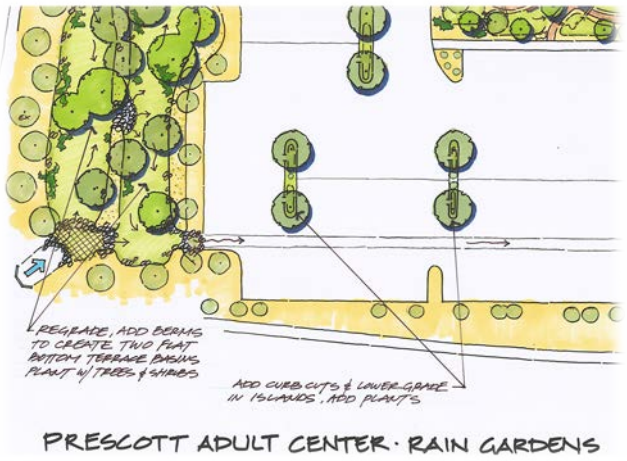
Green Infrastructure in the Granite Creek Watershed



Partial View of a GI Plan, Prescott Adult Center
Title Photo of Montezuma Well by Greg Webb, NPS

If you are in the Prescott area or the Verde Valley, you can't help but admire the prominent mountain range between these two areas as it sculpts a beautiful skyline - a backdrop to our lives and a piece of the beloved scenery of the area that draw tourists by the hoards; this range is the Black Hills. This large natural barrier in our landscape physically separates the Prescott area and the Verde Valley, and it makes it easy to think our watersheds are also separate.

When we zoom out and begin to see the whole picture, we can see the Verde River Watershed spans both areas. In fact, it's much, much larger than just these community areas. From our whole-picture perspective, we see how so many communities, human settlements as well as flora and fauna, are all part of the Verde River Watershed - something bigger than those small communities on this or that side of the Black Hills. We also start to see how the creeks and lakes we care about are all part of the same system. We learn how what happens upstream in the watershed has the ability to affect everyone downstream. The work done by Prescott Creeks is focused on one side of the Black Hills, but this work contributes to the health of the entire Verde River Watershed.

The Granite Creek Watershed runs from the forest south of Prescott to its confluence with the Verde River. There are challenges affecting the Granite Creek watershed. Two creeks and one lake are currently listed as impaired by the Arizona Department of Environmental Quality (ADEQ): Watson Lake for low dissolved oxygen, nutrients and pH, Granite Creek for low dissolved oxygen and *Escherichia coli (E. coli)* bacteria, and Miller Creek for *E. coli*.

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Watson Woods Riparian Preserve, Photo by Prescott Creeks

Green Infrastructure (continued from page 1)

It is expected that an additional lake and more creeks will be added to the impaired waters list in the near future. To address these issues, Prescott Creeks is working on keeping the pollutants from the broader watershed (from lawns, roofs, etc.) from reaching the creeks and lakes. Prescott Creeks was awarded a grant by ADEQ and coordinated with the City of Prescott and Barnabas Kane & Associates to install Green Infrastructure in two locations chosen to provide the most benefit and public exposure.

Green Infrastructure (GI) is a broad term for constructed features that rely on natural processes in soil, water, and plants to provide ecosystem services such as clean water, clean air, wildlife habitat, and temperature regulation. Prescott Creeks has two GI projects, one located at the Rowle P. Simmons Community Center on Rosser Street and one on the corner of Whipple Street and Miller Valley Road in downtown Prescott. These locations will have a combination of basins and rain gardens designed by Barnabas Kane, and implemented by the City of Prescott, Fann Environmental, and a mass of volunteers. At both sites, the idea is to slow and filter water as it comes off the streets with all of the non-point source pollution that is common in urbanized areas: such as oils, sediment, pesticides, etc. Furthermore, they will beautify the town, creating attractive spaces that are inviting to people and birds.

These GI projects are estimated to prevent 8 tons of sediment and over 200 lbs. of nutrients from washing downstream each year. In addition to filtering overland flows, these sites will be equipped with educational signs, paths, benches and hundreds of native plants. This is just the first of many GI projects Prescott Creeks hopes to see become a reality in the Granite Creek Watershed to greatly improve water quality in our creeks and lakes.

Prescott Creeks is a nonprofit organization with the mission to achieve healthy watersheds and clean waters in central Arizona for the benefit of people and wildlife through protection, restoration, education and advocacy. Other projects have included the restoration of Watson Woods Riparian Preserve, the annual Granite Creek Cleanup, water quality monitoring, and One Man's Treasure. The work being done in the Granite Creek watershed is impacting the larger Verde River Watershed and many of the projects being implemented in the Prescott area can be transferrable to other areas of the Verde River Watershed.

More information is available at www.PrescottCreeks.org.

Article by Ann-Marie Benz, Prescott Creeks
Editing Contributions by Marianne Davis

A watershed is, "that area of land, a bounded hydrologic system, within which all living things are inextricably linked by their common water course and where, as humans settled, simple logic demanded that they become part of a community."

- John Wesley Powell

Raccoons: Are They Native to AZ?

The raccoon is a medium-sized mammal with a trademark facial mask, high intelligence, and remarkably dexterous front paws. Because they are common, people might think they are native throughout the United States.

Actually, in pre-Columbian times, evidence shows raccoons were abundant only by rivers and in woodlands of what is now the Southeast United States. Other raccoon species were in Central America and the Caribbean. The first known written account was by Christopher Columbus in 1492 in the Caribbean when he saw them as fishermen's pets. In the 1520s, Spanish explorers traveled through what is now South Carolina and Georgia, and recorded sighting raccoons. This was the first European record in what is now the United States. Hunted for meat, raccoons were exterminated in Hispaniola by 1513 and in Cuba and Jamaica by 1687.

In 1608 in Jamestown, Virginia, Captain John Smith recorded raccoons, creating a name from the Algonquin term "abrab-koon-em," which is derived from "arakun" meaning "he who scratches with his hands."

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Photo by Paxton Woelber
Article by Kathy Davis

The State of the Watershed

The Verde River saw the fourth year in a row of below normal winter runoff. During the winter runoff season, defined as January through May for Arizona, the Verde only recorded a volume of 70,520 acre-feet of water at the Verde below Tangle Creek gauge. This ranks as one of the driest runoff seasons on record and comes in at 24 percent of normal.

For the same period, an average of 2.42 inches of precipitation fell over the Verde Watershed, which is only 36 percent of normal. The dry conditions are clearly evident around the Verde Watershed and are represented in the US Drought Monitor (http://droughtmonitor.unl.edu/) with most of the region categorized as being in a severe to extreme drought.

How about some good news?
The latest US Seasonal Drought Outlook (http://www.cpc.ncep.noaa.gov/products/Drought/) indicates a significant likelihood for improving conditions later this year for the Verde Watershed. The reason is a developing El Niño event over the Pacific Ocean that typically translates to an increased chance of a wet fall and winter over Arizona. In addition, climate prediction models have been pointing to the possibility of above normal rainfall this summer; however, this differs from general statistical relationships that show a slight trend towards drier monsoon rains during an El Niño event. One thing is for sure, monsoon rains show far less variability than winter precipitation over the Verde Watershed with an average of 6.14 inches of rain during the June 15 – September 30 period.

Article by James Walter, Salt River Project

Water Conservation at Home

Residential water use includes both water used indoors (bathing, cooking, cleaning, etc.) and water used outdoors (watering plants, swimming pools, washing cars, etc.). In Arizona, about 25% of the water supply is for municipal use, and most of this is residential. **Each person uses about 100 gallons per day, and as much as 70% of that water is used outdoors, especially in summer.** Residents that incorporate water efficiency into everyday life will help to preserve water for future generations.

This summer, try a few of these suggestions to help reduce your own outdoor water use:

- Plant low-water use and drought-tolerant grasses, ground covers, shrubs and trees.
- Group plants according to their water needs.
- Minimize turf/grass areas.
- Minimize evaporation by watering during the early morning hours when temperatures are cooler.
- Reduce evaporation by using a 2-3 inch layer of mulch around plants.
- Water deeply but less frequently to create healthier and deeper root systems.
- Track how much rain and irrigation your yard receives. Adjust watering schedules to the season.

Adapted from the Arizona Department of Water Resources Residential Use Webpage

The Verde River Basin Partnership

◆ Informing the community about our water ◆

The Verde River Basin Partnership is a non-profit organization comprised of both individual members and entity partner members (public and private organizations) who share a common goal. This goal is to support and preserve the long-term health of the Verde River and its watershed.

Our Mission:
The Partnership is a scientific and educational resource raising awareness among citizens and community leaders about the workings and limitations of Verde River Basin's interconnected groundwater and surface water systems, and the life they support.

Our Vision:
The Partnership aims to secure the long-term health of Verde River Basin's groundwater and surface waters, by assisting citizens and community leaders in exploring strategies and management practices that will sustain the Verde River system for all future generations.

Learn more about us and get involved:

- Visit our website
- Find us on Facebook
- Read our Guiding Principles
- Become a volunteer
- Make a donation
- Email us at info@vrbp.org

"In union there is strength." - Aesop
We bring together partners that have a regional stake in the Verde River Basin for meaningful conversations and educational experiences.

Raccoons (continued from page 3)

In the 17th century, various tribes in the Great Lakes region traded raccoon pelts; the southern end of Lake Erie was the northern limit of raccoon's distribution.

Early trappers and pioneers did not record raccoons during exploration and settlement of the other parts of the United States, so their initial expansion may have begun a few decades before the 20th century. The first urban sighting was in Cincinnati during the 1920s.

The earliest record for Arizona is from 1894, when trappers caught raccoons along the Gila River. Now they are relatively common throughout the state.

With a population explosion starting in the 1940s, the estimated number in North America in the late 1980s was 15 to 20 percent higher than in the 1930s when raccoons were relatively scarce. Urbanization, expansion of agriculture, extermination of predators, and intentional introductions likely caused the increased abundance and distribution. The impressive ability to adapt enables them to live into a wide range of habitats, from mountainous terrains to large cities.

Raccoons, Photo by Jennifer Aitkens

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