WATER EDUCATION by DROP by DROP

November 2018

Welcome! This is a **WaterSmart** "***Drop by Drop***" factsheet; the new water education program sponsored by the City of Prescott. Each month learn more about Prescott's water resources. From history to infrastructure, together we'll discuss Prescott water one drop at a time!

WaterSmart Factsheet Summary:

- *Groundwater is finite*
- *Groundwater is a shared resource*
- *Prescott AMA groundwater is regulated and monitored by the Arizona Department of Water Resources (ADWR)*

For more information on the Prescott AMA groundwater supplies go to www.azwater.gov

What is Groundwater?

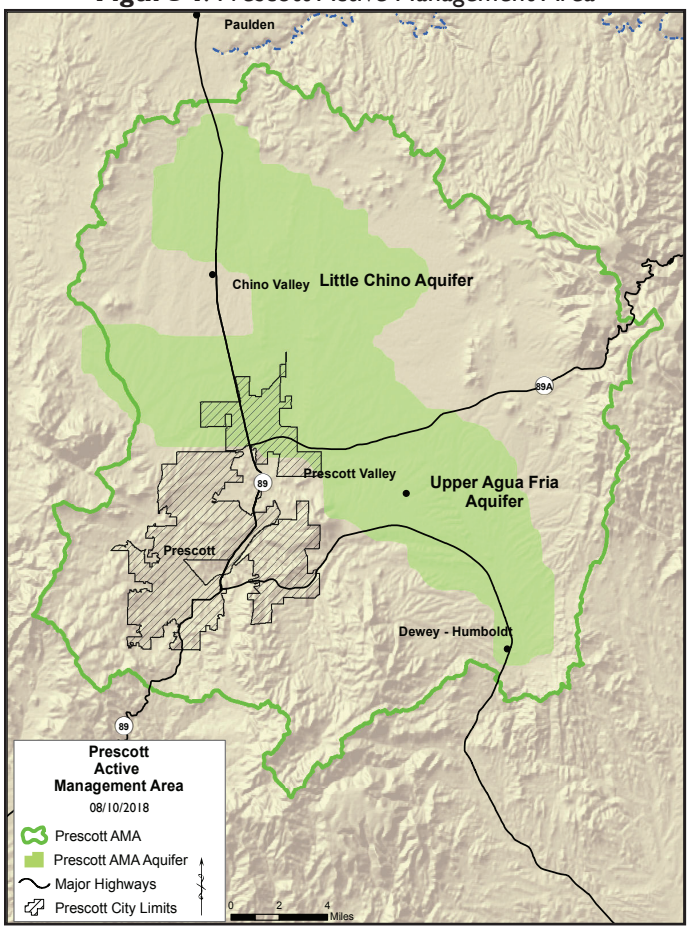
Groundwater is water that is stored within the earth, in between the small gaps of rock and sediment. Groundwater storage and movement is dependent on the makeup of the subsurface layers (units) of rock, gravel, and sand. The common term used for the underground layers that contain water supplies is an aquifer.

Local Aquifers

The City's water service area is located within the Prescott Active Management Area (PrAMA), encompassing roughly 485 square miles of Yavapai County, which also contains Prescott Valley, Chino Valley, Dewey-Humboldt, and unincorporated areas. The PrAMA AMA is regulated by the State; the City of Prescott has no jurisdiction over the PrAMA nor the aquifers it contains.

The Little Chino Sub-basin and the Agua Fria Sub-basin comprise the PrAMA and each contains an aquifer. It is estimated that the groundwater in storage is 2.9 million acre-feet. As viewed from the surface, the Little Chino Sub-basin contains the Upper Granite Creek Watershed, which begins in Prescott and runs northward to Chino Valley. The Upper Agua Fria Sub-basin, contains the headwaters of the Agua Fria River which runs southeastward from Prescott Valley to Dewey-Humboldt. Groundwater within each sub-basin, in subsurface aquifers, have water supplies ranging from just below the soil surface to depths of 500+ feet. To see approximate location of the aquifers in the Little Chino and Upper Agua Fria Sub-basins, see Figure 1.

Figure 1: Prescott Active Management Area



Join us at noon on the 3rd Wednesday every month at the Prescott Public Library.

PRESCOTT PUBLIC LIBRARY

Water Resource Management
201 S. Cortez Street | Prescott, AZ 86303 | (928) 777-1645
www.prescottwater.com

CITY OF PRESCOTT ARIZONA

Follow us on Facebook at:

City of Prescott (Official)

We can all help to preserve our limited water supply by being smart with water use:

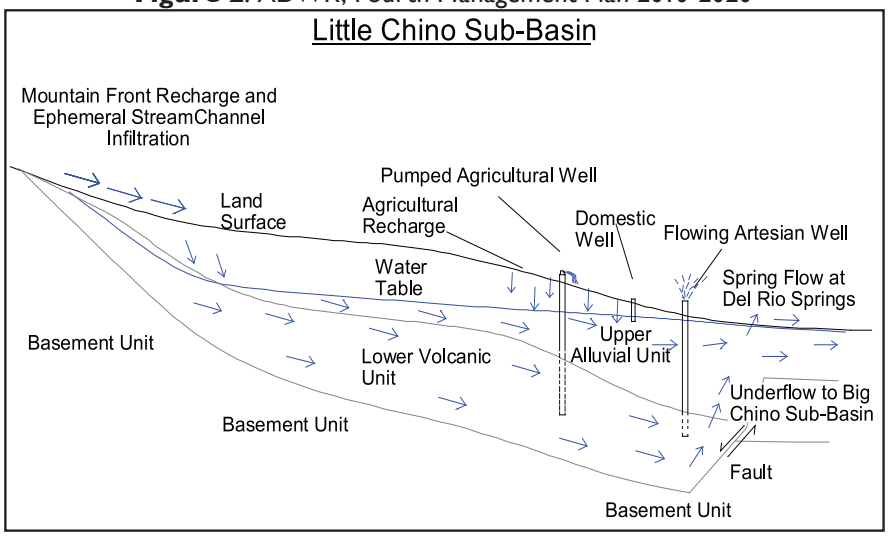
- Installing low-flow shower heads, toilets, and faucets
- Taking shorter showers
- Irrigating landscapes at night
- Maintaining native vegetation, supplement with new native and low-water use plants
- Finding and fixing leaks both inside and outside the house
- Washing vehicles less often
- Operating dish washing machines and clothes washing machines only when full

Reference: ADWR

Little Chino Aquifer

The City of Prescott pumps water from the Little Chino Sub-basin, which consists of two aquifer units: an Upper Alluvial Unit and a Lower Volcanic Unit, see Figure 2. City wells reach down into the Lower Volcanic Unit, while most privately owned wells pump from the Upper Alluvial Unit. Over time, rain and snow melt recharge the porous rock of the aquifer; however, this recharge occurs very slowly. Most water naturally entering the Little Chino Sub-basin aquifer originates from the streams that drain the Bradshaw Mountain Granite Creek and Willow Creek; however, aquifer recharge typically only occurs during very high precipitation events. As these streams flow, several areas of porous rocks in the Little Chino Sub-basin aquifer accomplish recharge by infiltration.

Figure 2: ADWR, Fourth Management Plan 2010-2020



Arizona Department of Water Resources (ADWR)

In 1980, The Arizona Groundwater Management Act was adopted into state law. It recognized the need to manage the state's finite groundwater resources to support the growing population and economy. The AMAs were established to provide long-term management and conservation of limited groundwater supplies. This is accomplished through regulations and tracked through ongoing data collection.

What are a couple examples groundwater regulations?

•A permit to drill a well is required
•Municipalities or others who operate large water production wells in an AMA, must file annual reports documenting the supplies withdrawn from the aquifer and how they were used within their water service areas.

What are some examples of ongoing data collection?

ADWR has a scientific division that performs a variety of data collection to support decision-makers and citizens of Arizona.
•Collection and management of groundwater levels.
•Analysis of groundwater levels with other data sets to aid in future water planning
•Development of groundwater flow models and predictive water-use scenarios.

Be WaterSmart!

Always use a broom to clean walkways, driveways, decks and porches, rather than hosing off these areas.

(Source: Water Conservation Tips for Residents, EPA)

Water Smart™

CITY OF PRESCOTT ARIZONA

Printed on Recycled Paper
Each ton (2,000 pounds) of recycled paper saves 7,000 gallons of water!

WATER EDUCATION by DROP DROP