

Activity 2 - Crossword Puzzle (6th -12th grades)

Groundwater

In many areas of Arizona, people pump more water from the ground than nature can replenish, so Central Arizona Project (CAP) was built to help conserve groundwater supplies. CAP's aqueduct system is 336 miles long and delivers 1.5 million acre-feet of water to its customers in Maricopa, Pima and Pinal counties annually. Central Arizona Project has more than 80 customers which fall into three groups: municipal, agricultural, and Indian users. CAP's vision includes delivering its full allocation of Colorado River water, 2.8 million acre-feet to central Arizona reliably, cost effectively and in an environmentally sound manner with the highest regard for employee safety and health, evolving public needs and customer satisfaction.

Recharge

In addition to delivering water to customers, Central Arizona Project is also responsible for planning and operating recharge sites are designed to store water underground for future use. Just as you can put money in the bank to use later when you have need for it, Arizona is storing, or "banking" water by spreading it on the ground in locations where it can sink or percolate into the groundwater aquifer. This water may then be pumped out and used in the future. One of the largest recharge locations in Arizona is the dry Salt River bed, which is operated by the Salt River Project. Tucson is also constructing areas where water can be spread for groundwater recharge.

Since Colorado River water is available to Arizona farmers, they can use surface water supplies instead of groundwater to irrigate farmland. This means less groundwater is pumped by farmers for watering their crops. Cities are treating Central Arizona Project water for drinking and reducing groundwater pumping.

Reclaimed Water

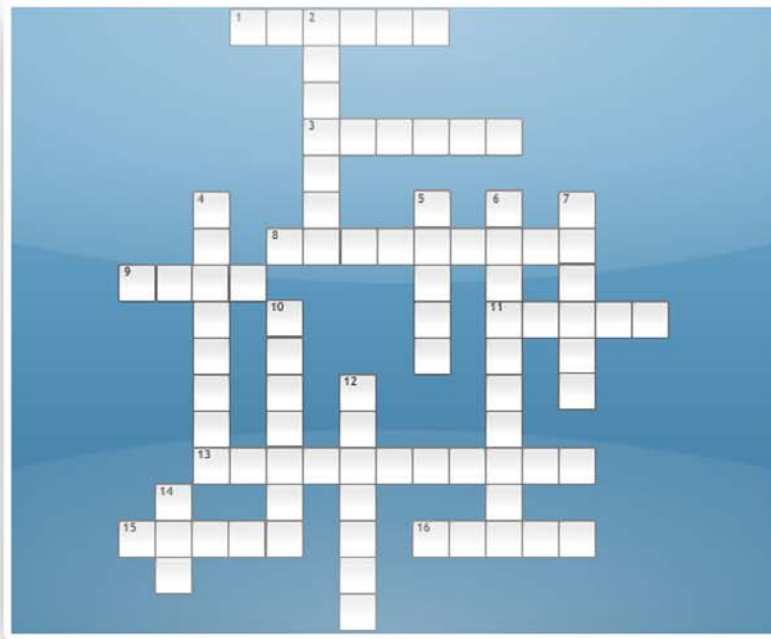
Reclaimed water is treated wastewater from homes and businesses. It is the water that has already been used and can be collected and treated so it is usable once again. The reclaimed water is delivered through a separate water system. It is usually used for grass facilities like parks and golf courses. It can also be used to cool power plants and irrigate agriculture. In the future there will probably be a separate reclaimed water line next to other utility lines.

Personal Water Conservation

Individual people can also conserve water in many ways. Look for leaks in toilets and sinks and fix them. Use water efficient plumbing fixtures and appliances that use less water than older fixtures. Take shorter showers. Turn off the tap when you are brushing your teeth. Keep a jug of water cooling in the refrigerator rather than running water from the tap until it turns cool. Running the dishwasher only when it is full can save a household 10-20 gallons of water per day. Outdoors, savings of water can result from sweeping sidewalks and driveways instead of hosing them down. In addition, desert landscaping can reduce outdoor water use by 50 percent. On average, desert landscaping needs about 15 gallons of water per square foot each year while grass only needs about 27 gallons.

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Use the clues to fill in the crossword puzzle with the correct words.



ACROSS

1. CAP's _____ includes delivering its full allocation of Colorado River water, 2.8 million acre-feet to central Arizona reliably, cost effectively and in an environmentally sound manner.
3. Recharge sites are designed to store water underground for _____ use.
8. CAP creates recharge sites by spreading water on the ground in specific locations where it can sink or _____ into the groundwater aquifer.
9. Reclaimed water has already been _____ and can be collected and treated so it can be used again.
11. Taking shorter showers and turning off the tap when you are brushing your _____ can help conserve water.
13. Central Arizona Project was built to help conserve _____.
15. Individuals can save water by looking for _____ in toilets and sinks and fixing them.
16. Reclaimed water is usually used for grass facilities like _____ and golf courses.

DOWN

2. Since Colorado River water is available to Arizona farmers, they can use _____ water supplies instead of groundwater to irrigate farmland.
4. Cities are _____ Central Arizona Project water for drinking and reducing groundwater pumping.
5. Reclaimed water can be used to cool _____ plants and irrigate agriculture.
6. Reclaimed water is treated _____ from homes and businesses.
7. _____ landscaping can reduce outdoor water use by 50 percent.
10. Running the dishwasher only when it is full can save a household 10-20 _____ of water per day.
12. Arizona is storing, or " _____ " water in groundwater aquifers for use in the future.
14. One of the largest recharge locations in Arizona is the dry Salt River _____, which is operated by the Salt River Project.