

Drinking Water in the Desert – Albuquerque’s Water

How do you use drinking water? You drink it, of course. But if you live in Albuquerque, you also flush your toilets with it. You shower in drinking water. You probably water your plants in drinking water too.

Fifty years ago we thought we had so much underground water that we could never run out. We felt free to plant grass in our yards. We took long showers. Today we know that we do not have as much underground water as we thought. The aquifer, where out underground water is stored, is small. (See Diagram 1)

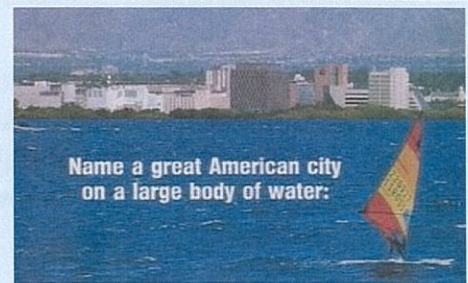
In 1993 Albuquerque used 40 billion gallons of water. That is a lot of water! We use water in many ways.

- How do you use water in your home?
- How do schools use water?
- How do hotels use water?
- How do hospitals use water?
- How do the shopping malls use water?
- Can you think of other ways we use water?

We wanted to make sure we had enough water for the future. We did two things.

First, we made plans to start using water from the river. We built a dam. We built a plant to clean the water. You will learn more about where this river water comes from during the RIO Field Trip. In 2009 we started to use water from the river.

Second, we asked everyone in Albuquerque to use less water. Here in the desert we have to be careful with our water. There are many ways that we can save water.



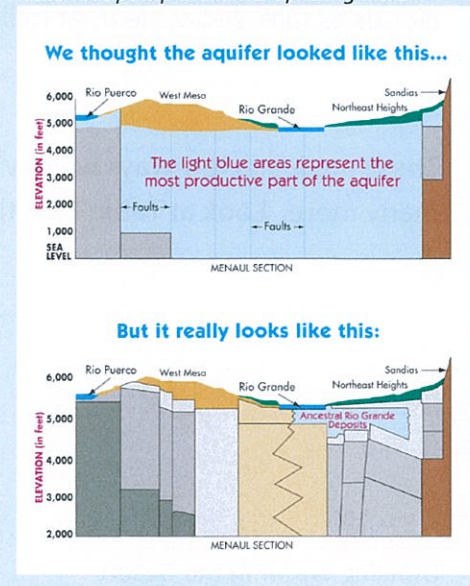
This ad for Albuquerque was used in magazines during the early 1980's. The ad is wrong for two reasons.

We thought the aquifer held as much water as Lake Michigan. We were wrong.

The ad makes you think the aquifer is like an underground lake. It is not. Our aquifer water just fills spaces between rocks and dirt.

This diagram shows a cross section of Albuquerque and the land it sits upon. Think of a cake. The frosting on top represents where people live. The cake is the ground the city is built upon. Your school would be a tiny speck on top of the cake.

Diagram 1. The aquifer holds our underground water. We pump the water up using wells.



We asked people use low-flow shower heads. A five-minute shower only uses 15 gallons of water instead of 35 gallons. If you take a shallow tub you can save 30 gallons of water. Here are some other ways we asked people to use less water.

Change out old toilets!

In the early 1990's most toilets used up to seven gallons per flush. Today most people in Albuquerque use low-flow toilets. Each flush uses less than 2 gallons of water.



Don't let faucets run and run!

The only time water should be running in the sink is when it is being used. Today we know to turn off the faucet when we brush our teeth or wash our hands. Outside, you can put a nozzle on your hose to make sure hose water is not wasted.



Get rid of your lawn and use desert plants instead!

It takes about 32 inches of water to grow grass. In Albuquerque we are lucky to get 9 inches of rain a year. Where does the other 23 inches of water come from? We water with drinking water. On the other hand, desert plants use very little extra water. They can be beautiful. Desert animals like these plants too.



Water when it's cool, not during the hot part of the day!

If you water during the hot part of the day the water evaporates. The plants do not have time to use it. That water is wasted. It becomes a gas, water vapor. Water vapor will form clouds. The clouds will blow away from Albuquerque before they drop from clouds as rain, snow, sleet, or hail.



These are just a few ways we have changed the way we use water. You can probably think of many more. Look at Table 1 on the next page to see all of our conservation work was worth it.

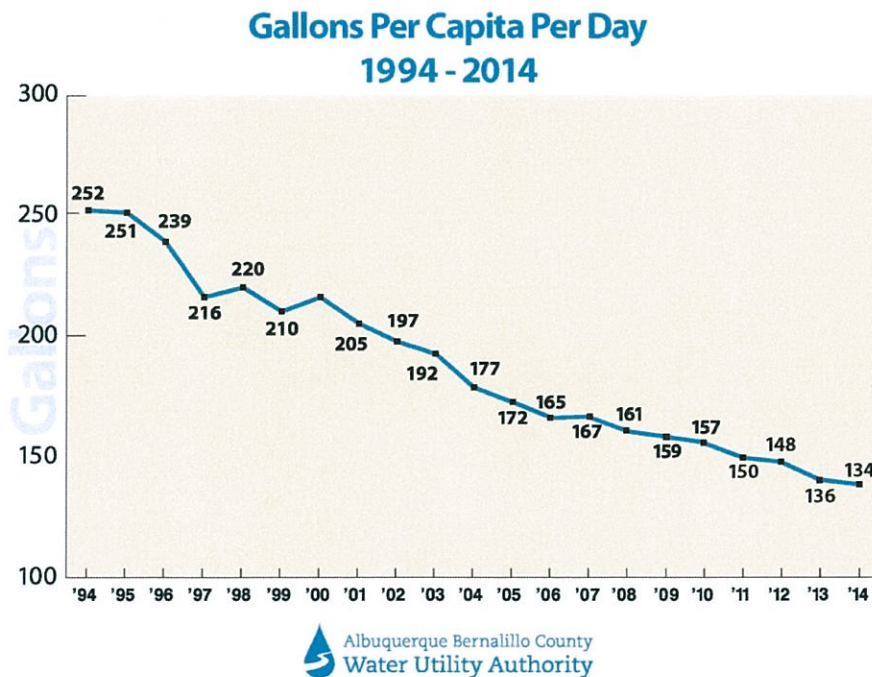
Table 1. Water use and population growth from 1993 to 2013

Year	Approximate Gallons of Water Used	Approximate Number of People Living in Albuquerque
1993	40,000,000,000	435,000
1998	36,000,000,000	450,000
2003	33,000,000,000	475,000
2008	32,000,000,000	523,000
2013	31,000,000,000	557,000

Over the last 20 years our water use has changed. We used 40 billion gallons in 1993. We used 31 billion gallons in 2013. Do more or fewer people live in Albuquerque? How can you explain this?

The graph below. It shows per capita water use. That means how many gallons one person used in one day. Our goal was to get down to 150 gallons of water per person per day by the year 2015. Did we achieve that?

Diagram 3. Albuquerque has learned how to save water!



You can see that we have learned that part of being a good citizen is protecting the things we all share, like drinking water in the desert.

You can help us get the word out. Tell people you know how important it is to save water. Choose three facts in this article and/or the Water Smart Math Worksheet. Use those facts to write and perform a one-minute public service announcement. Why is it important to save water? What is one thing everyone should do to save water? How much water would this one action save?



Albuquerque Bernalillo County
Water Utility Authority